STUDY REPORT
CAA-SR-89-24

LOGISTICS FORCE PLANNER ASSISTANT (LOG PLANNER)

SEPTEMBER 1989

PREPARED BY
FORCE SYSTEMS DIRECTORATE

US ARMY CONCEPTS ANALYSIS AGENCY
8120 WOODMONT AVENUE
BETHESDA, MARYLAND 20814-2797

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Director
US Army Concepts Analysis Agency
ATTN: CSCA-FS
8120 Woodmont Avenue
Bethesda, MD 20814-2797

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The study was conducted to develop an automated source of planning-related information for Army Staff logistics planners. The information provided is focused on the Total Army Analysis (TAA), the process by which the Army force structure is developed, including the elements of the force which provide logistics support. Four basic modules of information are included in the system: a description of the TAA process, a description of specific activities and procedures associated with the process, a discussion of two methods of analysis appropriate to issues arising during the process, and the identification of data reports available to support the analysis of logistics readiness of the programmed force elements. The system is implemented on a MS-DOS based microcomputer, using the "Knowledge Pro" software tool.

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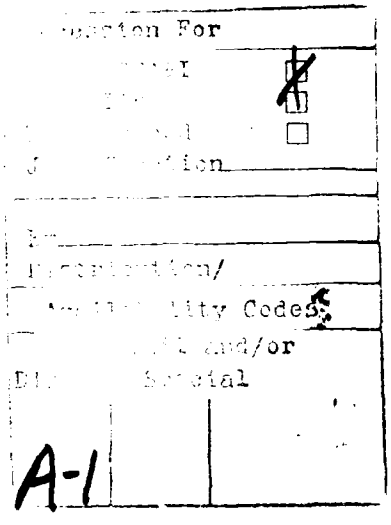


Prepared by

FORCE SYSTEMS DIRECTORATE

US Army Concepts Analysis Agency
8120 Woodmont Avenue
Bethesda, Maryland 20814-2797

DEPARTMENT OF THE ARMY
US ARMY CONCEPTS ANALYSIS AGENCY
8120 WOODMONT AVENUE
BETHESDA, MARYLAND 20814-2797

REPLY TO
ATTENTION OF:

CSCA-FSL/P (5-5d)

13 MAR 1990

MEMORANDUM FOR Deputy Chief of Staff for Logistics, ATTN: DALO-PLF,
Headquarters, Department of the Army,
Washington, D.C. 20310-0450

SUBJECT: Logistics Force Planner Assistant

1. Reference memorandum, DALO-PLF, 14 March 1989, SAB.

2. Reference memorandum directed the U.S. Army Concepts Analysis Agency (CAA) to develop a system to provide staff logistics planners with information about the Total Army Analysis (TAA) process and the development of the combat service support structure.

3. A microcomputer-based knowledge system was developed and successfully demonstrated. Four modules of information are included in the system--a description of the TAA process, a description of the associated staff activities, two data analysis methodologies appropriate during the TAA process, and a description of reports available from the Logistics Decision Support System.

4. This final report describes the system development effort. Copies of the working system in diskette form and the system User's Manual will be forwarded separately for sponsor use.

5. Questions and/or inquiry should be directed to the Assistant Director, Force Systems Directorate, U.S. Army Concepts Analysis Agency, 8120 Woodmont Avenue, Bethesda, MD 20814-2797, AUTOVON 295-1607.

E. B. VANDIVER III
Director

CAA	**LOGISTICS FORCE PLANNER ASSISTANT (LOG PLANNER) STUDY**	**STUDY SUMMARY CAA-SR-89-24**

THE REASON FOR PERFORMING THE STUDY was to develop a more comprehensive and integrated approach to conveying information about the combat service support (CSS) units planning process to Army Staff logistics planners. Personnel newly assigned to logistics planning need an orientation to the overall process. More experienced planner personnel need access to specific information for reference purposes.

THE STUDY SPONSOR was the Deputy Chief of Staff for Logistics, Headquarters, Department of the Army, who established the study objective and monitored the study activity.

THE STUDY OBJECTIVE was to develop a computer-based assistant to familiarize logistics force planners with the management and evaluation of CSS issues.

THE SCOPE OF THE STUDY was the development of logistics planning information needs in the context of the Total Army Analysis (TAA) process.

THE MAIN ASSUMPTION of this work is that the system is to provide information in support of the overall CSS programming process. It is not intended to support specific CSS problem solving situations.

THE BASIC APPROACHES used in this study were to:

(1) Identify the information needs associated with the management and evaluation of CSS issues within TAA.

(2) Design the modules and associated files, comprising the system, using knowledge processing technology.

(3) Demonstrate the system to personnel with logistics planning responsibilities to assess its usefulness.

THE PRINCIPAL FINDINGS of the work reported herein are as follows:

(1) A flexible, easy to use, microcomputer-based system to present planning-related information to logistics force planners was possible to develop and found acceptable in demonstrations of the system.

(2) There will be an on-going requirement to update the information in the LOG PLANNER as the TAA process evolves and undergoes revision.

(3) There is no formal arrangement for tracking force structure issues as they evolve during the TAA process. Only approved force structure changes are recorded in the formal Army data systems. A need to maintain visibility of all issues, for reference in subsequent cycles of the TAA, is indicated.

THE STUDY EFFORT was directed by Mr. James J. Connelly, Force Systems Directorate.

COMMENTS AND QUESTIONS may be sent to the Director, US Army Concepts Analysis Agency, ATTN: CSCA-FSL, 8120 Woodmont Avenue, Bethesda, Maryland 20814-2797.

Tear-out copies of this synopsis are at back cover.

CONTENTS

FIGURES

TABLES

LOGISTICS FORCE PLANNER ASSISTANT (LOG PLANNER)

CHAPTER 1

EXECUTIVE SUMMARY

1-1. PROBLEM. Logistics force planning is concerned with the combat service support (CSS) units needed to sustain and maintain the combat units in the force. There is a need to more systematically convey the information about the planning process; its activities, methodologies, and participants to Army Staff (ARSTAF) logistics planner personnel. Personnel newly assigned to logistics planning need an orientation to the overall process. More experienced planner personnel need access to specific information for reference purposes.

1-2. BACKGROUND. Logistics force planning, as carried out within the Total Army Analysis (TAA) process, is a multiyear process involving extensive coordination among ARSTAF elements and with the major Army commands (MACOMs). Personnel assigned to this duty sometimes lack experience in the logistics planning environment. The necessary experience is often acquired by on-the-job training and day-to-day interactions with fellow planners. Current computer technology can provide, in a deskside workstation, considerable assistance with the conduct of logistics planning. In particular, knowledge processing technology is available to facilitate the storage and display of extensive amounts of planning related information.

1-3. SCOPE AND LIMITATIONS. The LOG PLANNER has been developed for the Office of the Deputy Chief of Staff for Logistics (ODCSLOG), Logistics Concepts and Doctrine Division (DALO-PLF), to support this division's CSS programming activities. These activities include the coordination of logistics issues arising throughout the multiyear, multiphase TAA process and the consolidation of these issues for presentation to senior Army management. For study purposes, this coordination responsibility is referred to as the "management and evaluation of CSS issues."

1-4. TIMEFRAME. Current (1989).

1-5. APPROACH AND METHODOLOGY. The study development process involved three sequential activities (Figure 1-1) and produced both a study report and an operational system on diskette. The activities were:

a. PLANNER Definition. The identification of the information needs associated with the management and evaluation of CSS issues.

b. PLANNER Implementation. The design of the information modules and associated files, comprising the LOG PLANNER, using knowledge processing technology.

c. PLANNER Evaluation. The demonstration of the system to personnel with logistics planning responsibilities, and summary of their evaluations. In addition, the evaluation process yielded changes (updates) to the information provided in the system.

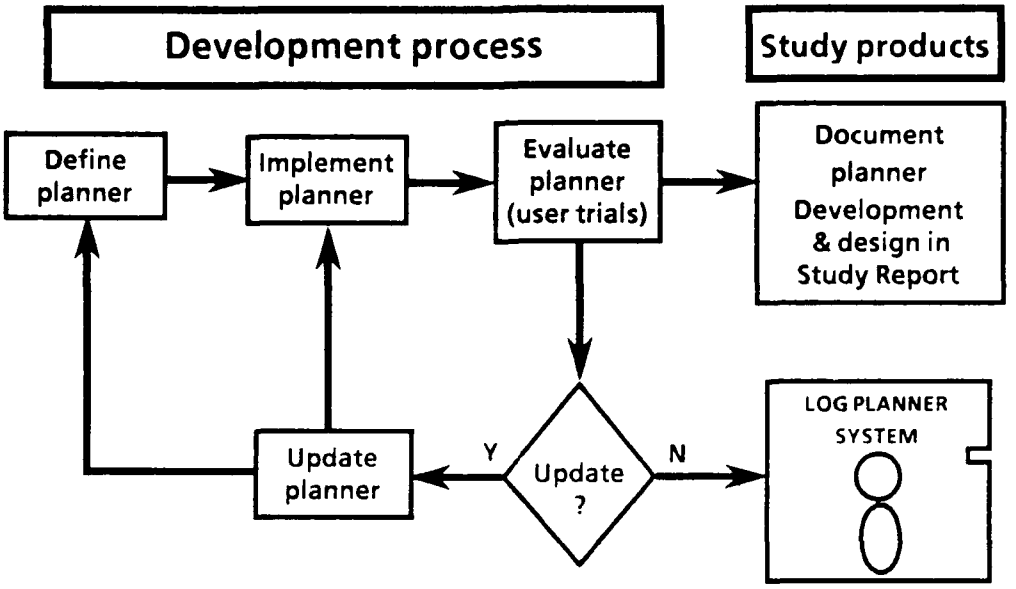


Figure 1-1. Study Methodology

1-6. ESSENTIAL ELEMENTS OF ANALYSIS (EEA)

a. EEA 1: What are the types and sources of guidance, formal and informal, which direct the management and evaluation of CSS issues?

(1) Formal guidance is contained in the TAA regulation (Army Regulation (AR) 71-11) which prescribes a multiyear, multistage process of conferences and senior Army management reviews, culminating in a fully structured force including individual support elements. The "TAA Process Description" module of the LOG PLANNER is dedicated to an extensive discussion of this guidance.

(2) Informal guidance comes from the in-process senior Army management reviews conducted during the TAA process, which act on conference recommendations and otherwise direct specific force structure alterations. The overall procedures and practices which have evolved to implement these activities are described in the "Issue Coordination Management" module of the LOG PLANNER.

b. EEA 2: What data bases and computer model results are available to support the management and evaluation of CSS issues?

(1) The individual CSS issues are managed by informal systems of record keeping and analysis. Use of a specialized data base system to collect and transfer force structure issues (including CSS issues) from the MACOMs to the ARSTAF has just been developed (informally) by Office of Deputy Chief of

Staff for Military Operations and Plans (ODCSOPS) and used for the first time in the last Force Structure Conference (1988). No formal requirements or standards exist for handling individual issues.

(2) Several formalized Army data systems support the "quantitative" phase of the TAA process. In this phase, computer simulations and their associated data bases are used to generate the force structure, including CSS units. The data bases are subsequently updated to reflect resolution of individual force structure issues as the TAA process goes forward. Of these systems, the data system which most completely details the logistics readiness of the force is the Total Army Equipment Distribution Program (TAEDP). Access to this system and its information products (reports) is described in the "Issue Data Resources" module of the LOG PLANNER.

c. EEA 3: What processes, both analytic and judgmental, are used to support the management and evaluation of CSS issues?

(1) The identification of individual CSS issues is initiated at the MACOM level. The MACOM makes the first cut at identifying the "billpayers" to make up CSS shortages. If a resolution cannot be achieved within the MACOM assets, a cross-MACOM resolution may be made by Army senior management. The "Issue Analysis Methodology" module of the LOG PLANNER provides a discussion of a representative technique for conducting tradeoffs for use as a guide by ARSTAF planners in the review of such analyses.

(2) The judgmental process for CSS issues is most applicable in the forcewide "TAA Force Program Review" conducted by the senior Army management, where "horse blanket" summaries of the force status are used to support decisionmaking. The summaries are prepared for each type of unit in the Army (i.e., the SRC level (standard requirements code)). The summaries consist of a series of panels of information, each a data summary dealing with an aspect of the status of the SRC. The "Issue Analysis Methodology" module of the LOG PLANNER also includes an extended discussion of the (three) data summary techniques currently used in the horse blanket.

d. EEA 4: How effectively does the automated assistant convey information about the management and evaluation of CSS issues?

(1) The system was demonstrated to six personnel with logistics planning responsibilities; three were in ODCSLOG and three were at the Logistics Center, Fort Lee. Each individual completed a 12-question survey for each of the four information modules of the LOG PLANNER, which evaluated three aspects of the module design: information substance, information form, and module operation.

(2) The questions were subjective in character. When aggregated by design aspect, the three aspects of the system design (substance, form, and operation) were found to be satisfactory. Some respondents commented that further detail on some topics was needed. Changes were made in the delivered system to reflect those comments. The demonstration activity and results are detailed in Chapter 6.

1-7. OTHER KEY FINDINGS

(1) As described in the response to EEA 2, there is no formal arrangement for tracking force structure issues as they evolve during the TAA process. Only approved force structure changes are recorded in the formal Army data systems. There is, however, an institutional need to maintain force structure records, as evidenced by the manual record systems maintained by individual action officers. A requirement for a formal tracking/audit data system for all force structure issues is indicated.

(2) There will be an on-going requirement to update the information in the LOG PLANNER as the TAA process evolves and undergoes revision. Provision has been made for a built-in edit capability to make the needed changes without the need for specialized programming skills.

1-8. **SUMMARY.** The study directive called for a more systematic way to convey information to logistics planners about programming the CSS units with the development of a computer-based "assistant." The "assistant" is comprised of four information modules which provide information about: the overall TAA process which generates the CSS force requirements, the management of issues arising during the TAA process, several representative methodologies for analysis of force issues, and identification of Army data system reports quantifying the equipment readiness of the force structure evolved by the TAA process. Demonstration of the system to logistics planners was conducted with satisfactory results.

CHAPTER 2

INFORMATION OVERVIEW

2-1. INTRODUCTION. This chapter describes the need for information about the TAA process and relates these information needs to the essential elements of analysis of the study. For each need there is a statement of the relevance of the information to the TAA process, the current information situation, and the implication for the design of the LOG PLANNER.

2-2. PROBLEM. Logistics force planning is concerned with the CSS units needed to sustain and maintain the combat units in the force. There is a need to more systematically convey the information about this planning process, its activities, methodologies and participants, to ARSTAF logistics planner personnel. Personnel newly assigned to logistics planning need an orientation to the overall process. More experienced planner personnel need ready access to specific information for reference purposes.

2-3. BACKGROUND. Logistics force planning, as carried out within the TAA (Ref 1) is a multiyear process involving extensive coordination among ARSTAF elements and with the MACOMs. Personnel newly assigned to this duty often lack experience in the logistics planning environment. The necessary experience is often acquired by on-the-job training and day-to-day interactions with fellow planners. Current computer technology can provide, in a deskside workstation, considerable assistance with the conduct of logistics planning. In particular, knowledge processing technology is available to facilitate the storage and display of extensive amounts of planning related information.

2-4. SCOPE. LOG PLANNER has been developed for the ODCSLOG, Logistics Concepts and Doctrine Division, to support the division's activities associated with the overall coordination of the ODCSLOG participation in the TAA process. This focus is derived from the mission of the division (Ref 3):

> "Coordinates all ODCSLOG actions concerning logistics concepts, doctrine and force structure. Provides staff interface between ODCSLOG and other ARSTAF/Secretariat agencies and MACOMs for combat service support actions regarding Total Army Analysis ..."

This role involves the coordination of logistics issues arising throughout the multiyear, multiphase TAA process and the consolidation of the issues for presentation to senior Army management. For study purposes, this DALO-PLF coordination responsibility, referred to in the study directive as the microanalysis of CSS structure programming, is clarified to mean the "management and evaluation of CSS issues."

2-5. TAA PROCESS

a. Simplified TAA Process. The TAA process is a multiyear cycle of activities which generates the Army force structure. The process involves the participation of the ARSTAF and the MACOMs. Logistics staff planners participate in that portion of the process which is focused on the portion of

the force which provides combat service support. Considered in its simplest terms (Figure 2-1), TAA is a process which has inputs which constrain the force, computer-based analysis which develop the force within the constraints, and a force adjustment process based on an extensive process of analysis and decisionmaking to examine and resolve issues arising from the conduct of the computer runs. These issues are addressed and resolved to achieve the final, adjusted form of the force structure.

b. TAA Activity Relationship to EEA. Shown in Figure 2-1 are the TAA activities and their relationship to the essential elements of analysis prescribed in the study directive (Appendix B). The "TAA Process," that is, the entire ensemble of activities, relates to the formal guidance associated with the overall process (i.e., EEA 1(a)). The activities grouped into "Issue Coordination" relate to the informal aspects of guidance in the process (i.e., EEA 1,(b)). The activities grouped into "Data Systems" relate to the computer and data bases associated with the TAA process (i.e., EEA 2). The activities grouped into "Issue Analysis" relate to the methodology associated with the TAA process (i.e., EEA 3). A fourth EEA, not represented in the figure, relates to assessing the effectiveness with which the completed system operates to convey its information to its users. The following paragraphs describe each of the information needs associated with the activities identified in Figure 2-1.

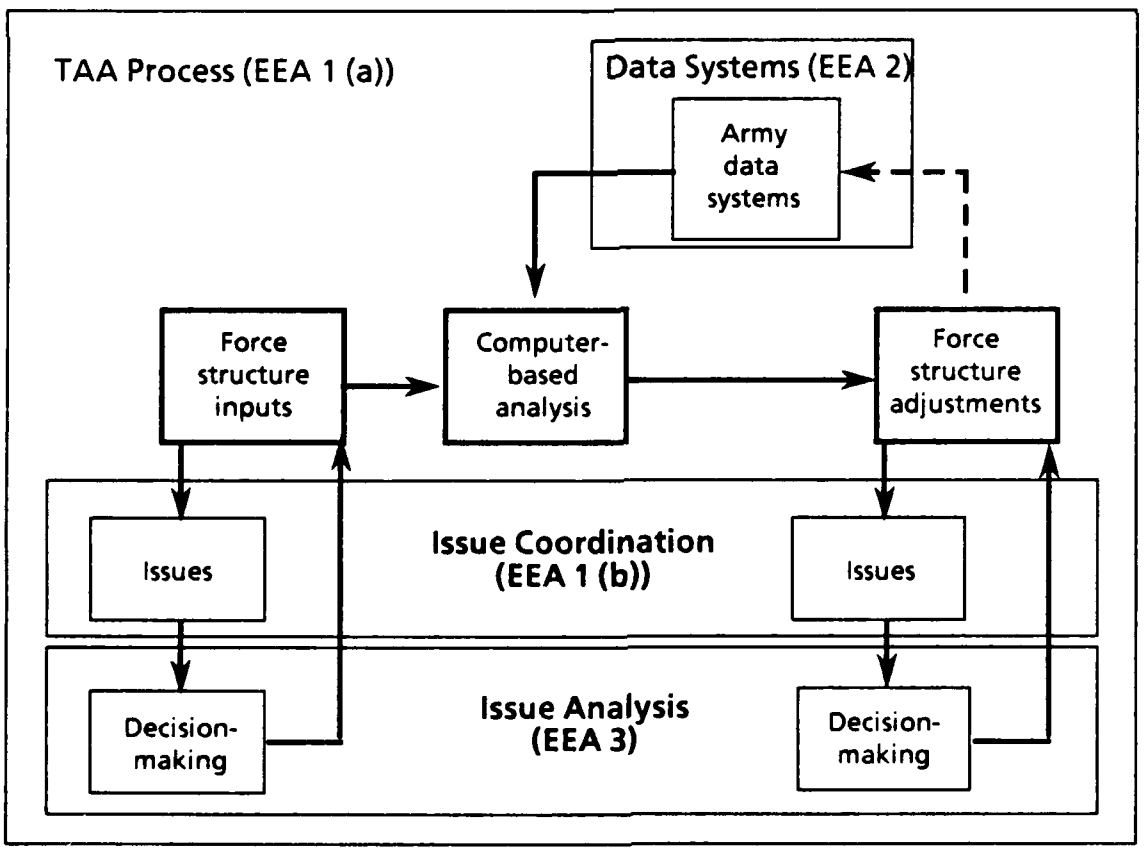


Figure 2-1. Simplified TAA Process

2-6. TAA PROCESS INFORMATION

a. Information Need. A description of the flow of the overall TAA process.

b. Information Relevance to TAA. An understanding of the overall TAA process is the starting point for knowledgeable participation in the process. This is particularly important, considering the multiyear duration of the process and the variety of organizational elements involved.

c. Current Situation. Formal guidance is contained in the TAA regulation (AR 71-11) which prescribes a complex, multiyear, multistage process of conferences and senior Army management reviews, culminating in a fully structured force including the combat service support elements.

d. Design Implication. Given the complexity of the regulation, a self-contained module of information, designated the TAA Process Description Module, is dedicated to discussion of this guidance.

2-7. ISSUE COORDINATION INFORMATION

a. Information Need. A description of the coordination activities involved in the organization and management of the diversity of issues which arise as the force structure evolves.

b. Information Relevance to TAA. Due to the scale of the force development process, the management of issue coordination is, in itself, a substantial part of the TAA activity.

c. Current Situation. The informal guidance comes from in-process senior Army management reviews, which act on conference recommendations and otherwise direct specific force structure alterations.

d. Design Implication. A self-contained module of information, designated the Issue Coordination Management Module, is dedicated to discussion of this guidance.

2-8. ISSUE ANALYSIS INFORMATION

a. Information Need. Descriptions of the types of methodologies appropriate to the analysis of TAA issues.

b. Information Relevance to TAA. The methodology descriptions are intended to acquaint logistics planners with the types of analysis which can be performed and which they may actually encounter in the course of management and evaluation of specific TAA issues. The information provided is intended to make logistics planners more critical consumers of analytic results rather than developers of such information.

c. Current Situation

(1) The analysis of individual CSS issues is principally conducted at the MACOM level. The MACOM makes the first cut of identifying the "bill-payers" to make up CSS shortages. Cross-MACOM resolutions of issues are made by Army senior management.

(2) The judgmental process for CSS issues is most applicable in the forcewide "TAA Force Program Review" conducted by senior Army management, using the "horse blanket" summaries of the force status. These summaries are prepared for each type of unit in the Army (i.e., at the SRC level). The summaries consist of a series of panels of information, each a data summary dealing with an aspect of the status of the SRC.

d. Design Implication. A self-contained module of information, designated the Issue Analysis Methodology Module, is dedicated to discussion of the techniques for tradeoff analysis and data summary.

2-9. DATA SYSTEMS INFORMATION

a. Information Needs. A description of the data available to quantify equipment readiness issues associated with the evolving force structure and the manner in which the data can be accessed.

b. Information Relevance to TAA. The structure of the force as it evolves over time is maintained in the several Army data systems. The data in these systems is then integrated into a detailed force equipment listing by the TAEDP, which tracks the required and authorized equipments for individual units. The data from the TAEDP system is available to logistics staff officers through reports generated by the Logistics Decision Support System (LOG DSS) maintained by ODCSLOG. These reports provide the planner with the status of the units in the force, particularly with respect to equipment readiness.

c. Current Situation

(1) The individual CSS issues are managed by informal systems of recordkeeping and analysis. Use of a specialized data base system to collect and transfer force structure issues (including CSS issues) from the MACOMs to ODCSOPS has just been developed (informally) by ODCSOPS and used for the first time in the last Force Structure Conference (1988). The issue information from the field was categorized by ODCSOPS into functional areas, printed out as individual issue sheets, and distributed in this paper form to ODCSLOG (and others) for coordination purposes. No formal requirement or standard for handling individual issues exist.

(2) A number of formalized Army data systems support the "quantitative" phase of the TAA process. In this phase, computer simulations and their associated data bases are used to generate the force structure. The data bases are subsequently updated to reflect resolution of individual force structure issues as the TAA process goes forward. Of these systems, the TAEDP data system provides the most complete detail on the logistics readiness of the force.

d. Design Implication. A self-contained module of information, designated the Issue Data Resources module, is dedicated to description of the LOG DSS reports and provision for access to these reports.

2-8. SUMMARY. This chapter has related the TAA process and the information needs about the process, to be provided by the LOG PLANNER. The information is incorporated into four information modules. The TAA Process Description Module provides a description of the overall TAA process. The Issue Coordination Management Module describes the organization elements, activities, and points of contact associated with the coordination of TAA issues. The Issue Analysis Methodology Module describes the methodologies appropriate to the analysis of TAA issues. The Issue Data Process Module describes the data available in the LOG DSS which quantifies readiness issues associated with the evolving force structure.

CHAPTER 3

PLANNER DEFINITION

3-1. INTRODUCTION. This chapter describes the concept of the LOG PLANNER as an assistant which supports its user with specialized information needs. These information needs led to the configuration of the LOG PLANNER as a set of four information modules which provide specialized information in support of the management and evaluation of CSS issues arising in the TAA process.

3-2. CONCEPT OF AN ASSISTANT

a. Nature of System. An assistant is a computer program to support the information needs of individuals working in a specialized area. The assistant provides the information in the form of extended text and graphics, not simply items of data and data reports, as is the case with management information/decision support systems.

b. Nature of Support. In this application, the assistant is intended to provide two types of support--instructional support and advisory support. In the instructional situation, the LOG PLANNER systematically advances through its informational holdings and provide the user with a complete exposure to the content. For convenience, this extended tour may be broken down into a series of sessions. In the advisory situation, the LOG PLANNER offers the user (more experianced) a sequence of information topic selections and responds with the particular information of interest.

3-3. INFORMATION NEEDS - GENERAL

a. Information Scope and Sources. Information of interest is the information about the activities in the TAA process which involves the Concepts and Doctrine Division of ODCSLOG. The TAA activities have been described and related to the information needs of the division in Chapter 2. In the following paragraphs, these needs will be expanded to identify the scope of the information to be provided and the sources to be consulted to acquire the necessary details.

b. Limitations on Information

(1) The knowledge incorporated into the LOG PLANNER is subject to change. At present, the TAA process is being transformed from a 2-year cycle of activity to a 4-year cycle, consisting of two 2-year subcycles. As this new arrangement is worked through, changes will occur. These updates will have to be incorporated into the LOG PLANNER descriptions to ensure that the system reflects the current practice.

(2) To a somewhat lesser extent, the dynamics of the duty assignments of the ARSTAF personnel participating in the process also affect the validity of the information ir the assistant. As personnel shift duties, office responsibilities have to be reviewed and the information updated as required.

(3) To deal with these changes, the assistant will require ongoing update to maintain the integrity of its information.

3-4. INFORMATION NEEDS - TAA PROCESS

a. Information Needs. A fundamental need is a description of the overall TAA process.

b. Information Scope. The TAA process is organized into a quadrennial cycle of analysis and decisionmaking comprised of two 2-year sequences of activity, herein identified as Sequence I and Sequence II. TAA Sequence I is considered the baseline in that it initiates a development which takes into account a full reconsideration of the force structure. The cycle consists of the following sequence of activities:

- Force Structure Conference I - A multi-day meeting of ARSTAF and MACOM personnel address the force sizing guidance and update and obtain senior management approval of the force development data base.
- Quantitative analysis - The development by the Concepts Analysis Agency of a Design Force, based on the conduct of warfighting simulations and analyses to determine time-phased, balanced, and geographically distributed force structure requirements, identified as the Design Force.
- Force Structure Conference II - A multi-day meeting of ARSTAF and MACOM personnel to address the development of the Design Force into the Base Force by incorporation of chains, additions and constraints or end-strength and structuring.
- Force integration analysis - A multi-day meeting of ARSTAF and MACOM personnel determination of the executability of all aspects of the Base Force addressing equipment, manpower, facilities, training, and sustainment issues.
- POM development - The translation of Office of the Secretary of Defense (OSD) and Army planning and programming guidance into a comprehensive and detailed allocation of forces, manpower, and dollars for a 5-year period and a general allocation for an additional 10 years.

The next sequence, TAA Sequence II differs from Sequence I in that the activities refine the baseline results of the prior cycle using well-defined excursions from the baseline scenarios, rather than a complete reconsideration of the force. Again, the cycle consists of the (above) five activities, which again produce the POM Force for budgetary action. At the conclusion of TAA Sequence II, the quadrennial TAA process starts again.

c. Information Sources. The principal source of information on the TAA process is the controlling AR 71-11. This regulation is currently (1989) under revision to reflect the transition from a 2-year force structure cycle

to a 4-year cycle. Use will be made of those parts of the regulation which remain unchanged. Additional information, in the form of informally developed staff materials, available which describes the activities associated with the transition to a 4-year cycle. Information on the Army Planning, Programing, Budgeting and Execution System (PPBES) (Ref 2) is also pertinent.

d. Information Module. The component of the LOG PLANNER which provides the TAA process information is designated the TAA Process Description Module. The implementation of the module is described in Chapter 4.

3-5. INFORMATION NEEDS - ISSUE COORDINATION

a. Information Needs. A description is needed of the coordination activities involved in the organization and management for the diversity of issues which arise as the force structure evolves.

b. Information Scope. The issues are organized along function lines. Logistics issues are managed and coordinated by the ODCSLOG. The coordination of the issues, that is the preparation of the individual issues for evaluation and decisionmaking, involves the need for information about the following:

- Participants - The identification of the ARSTAF and MACOM participants in the management and evaluation of the logistic issue generated by the TAA Process. Interaction with the MACOMs, for logistics matters, is principally through the Logistics Center (Log Center) at Fort Lee, VA.

- Activities - The identification of the major activities of the TAA process as they progress over the first 2-year cycle of the quadrennial TAA process and are then repeated in the second 2-year cycle.

- Points of contact (POC) - The Army has developed and implemented the Organizational Integrator (OI) concept to expedite the fielding of integrated combat, service, and combat service support units. Identification of the personnel within ODCSOPS and ODCSLOG with these integration responsibilities is needed.

c. Information Sources. Information on the ODCSLOG organizational elements and their responsibilities is contained the ARSTAF organizational mission and function documentation (Ref 3). The lists of individual points of contact are available in an ARSTAF memorandum (Ref 4).

d. Information Module. The component of the LOG PLANNER to provide this information is designated the Issues Coordination Management Module. The implementation of the module is described in Chapter 4.

3-6. INFORMATION NEEDS - ISSUE ANALYSIS

a. Information Needs. Descriptions of the types of methodologies appropriate to the analysis of TAA issues are needed.

b. Information Scope. The following are the types of analyses which tend to recur at the staff level of logistics force planning. To more clearly delineate theory from practice, the descriptions are presented in two parts. The first part describes the fundamentals of the analysis methodology, the second part provides an example of the application of the methodology.

- Comparison of Alternatives. The task of this analysis is the identification, quantification, and evaluation of the factors relevant to the conduct of tradeoff among units which are competing for inclusion in the force under resource constraints. The methodology described is based on use of a spreadsheet technique which allows simultaneous consideration of the significant factors in a tradeoff and provides a clearly delineated basis for a tradeoff decision.

- Presentation of Information. The task of this analysis is to reduce the large volume of force-related information into meaningful aggregations for presentation to senior Army management. The specific methodologies described are: a frequency distribution technique to provide proportional (percentage) representation of the distribution of the quantities of force units and equipments; a cross-tabulation (crosstab) technique to examine data from two different perspectives at once; and a data table technique which collects individual items of related information into a compact table format.

c. Information Sources. The methodology for the comparison of alternatives is drawn from the information management-decision support literature. A simplified treatment of Saaty analytical hierarcheis is presented (Ref 9). The methodology for the presentation of information involves the use of the statistical techniques of "frequency distribution" and "cross-tabulation" described in standard statistical references (for example, Ref 10)

d. Information Module. The component of the LOG PLANNER that provides this methodology information is the Issue Analysis Methodology Module. The implementation of the module is described in Chapter 4.

3-7. INFORMATION NEEDS - ISSUE DATA

a. Information Needs. A description is needed of the types of data available on the evolving force structure and the manner it which it can be accessed for review.

b. Information Scope. The reports available from the TAEDP system are of two types:

- Reports on unit asset (equipment) distribution - these reports use various formats to identify the equipment assets of individual units and the status of specific equipments throughout the force.

- Reports on unit supportability (equipment readiness) - these reports use various formats to identify the shortfalls in unit readiness and specific equipments throughout the force, and the costs to correct these shortfalls to achieve a higher level of readiness.

c. Information Sources. The LOG DSS has an extensive set of documentation, including a user's guide for the Equipment Distribution Module of the LOG DSS (Ref 7). This guide has extensive descriptions and illustrations of the reports generated by the system.

d. Information Module. The component of the LOG PLANNER that provides this equipment distribution information is designated the Issue Data Resources Module. The implementation of the module is described in Chapter 4.

3-8. SUMMARY. This chapter described the information needs which led to the four information modules incorporated into the LOG PLANNER to support the activities of DALO-PLF. The modules describe the overall TAA process, the management of the coordination of the issues which surfaced during the process, the types of analysis considered appropriate for the analysis of the issues, and the data resources available to evaluate the distribution of unit assets (equipment) and the logistics supportability (equipment readiness) of units.

CHAPTER 4

IMPLEMENTATION OF PLANNER MODULES

4-1. INTRODUCTION. This chapter describes the approach to the design and implementation of the four information modules comprising the LOG PLANNER and a fifth module used to control overall operation of the LOG PLANNER.

4-2. DESIGN CONCEPT

a. The LOG PLANNER is an automated system for providing information to users on an interactive basis. These users may approach the system with a specific information need, a need for a review of selected topics, or a need for general exposure to all the information present (tutorial mode of presentation).

b. In providing the information, it is important that the system be uniform and predictable in its operation. That is, the access to the information should follow a pattern of selection which is logical and readily apparent to the users. Further, it is important that the system present the information with a consistent appearance. That is, the screen organization and appearance, to include text placement and the use of color, be uniform across the display of the system information.

c. The need for consistency in the operation and appearance of the system led to a "generic" approach to the system module design. That is, each module of the system is built using a common design for the module code and a common approach, or "protocol," for the arrangement of the information display.

4-3. GENERIC MODULE DESIGN. The "generic" module design provides for a standard sequence of processing steps, as shown in Figure 4-1 and described in the following paragraphs.

a. Initialization. This processing step sets values for parameters which identify the module name, the module mnemonic, and the text file associated with the module. Additional parameter values are set to define the window used to display the information, namely, the window name, size, and screen location. The module code also senses whether the user has selected the tutoring mode of operation and, if so, sets parameter values associated with operation in the tutorial mode.

b. Introduction. This processing step provides the user with a brief overview of the type of information provided by the module. This introductory material is displayed only if the user has requested operation in the tutorial mode.

c. Information Selection. This processing step allows the user to select from the information available in the module. A two-stage selection is normally provided. First, there is a selection of an information category. Second, within the category, a particular information item is selected.

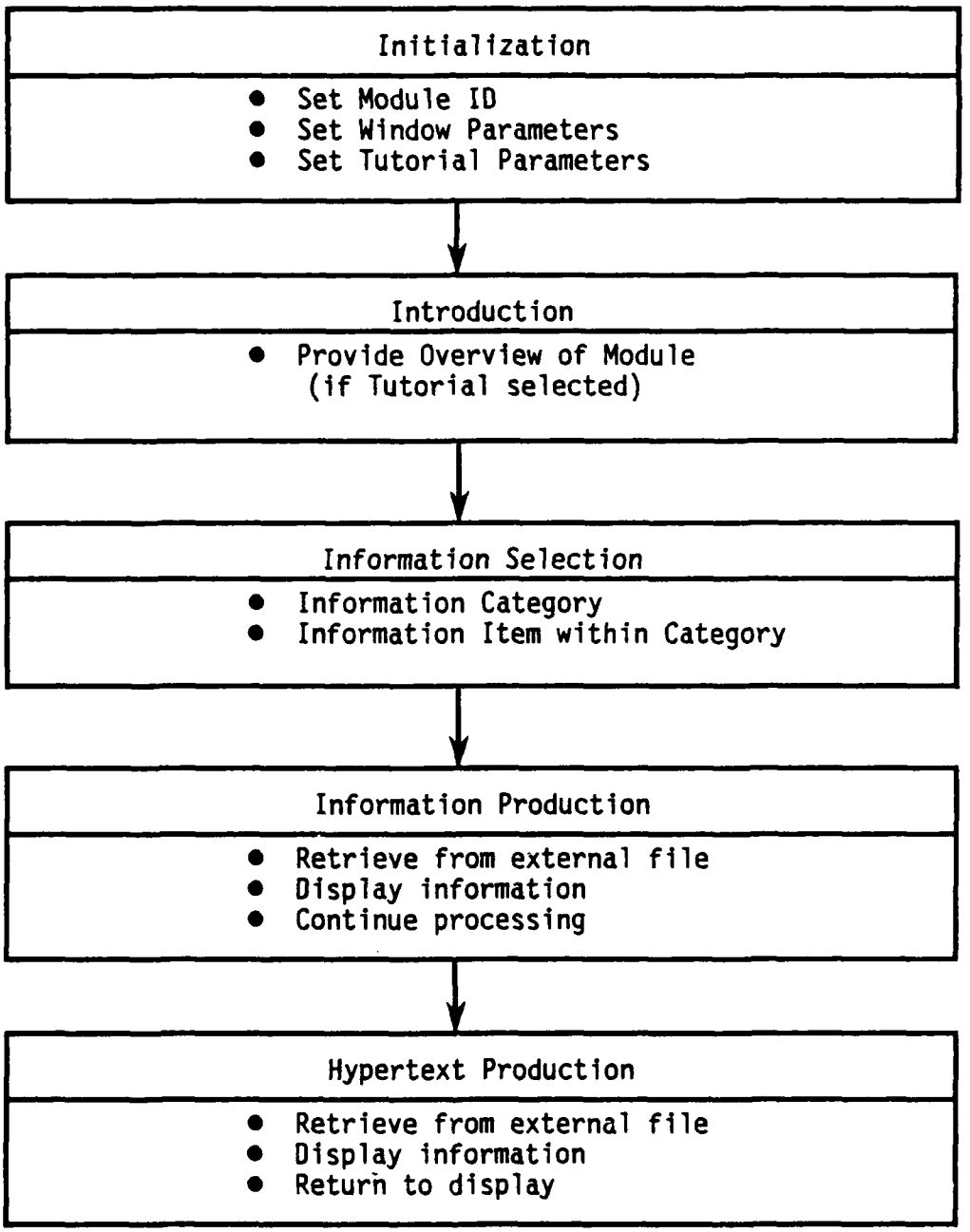


Figure 4-1. Generic Module Design

d. Information Production. This processing step responds to the user request for information based on a "menu" selection. The module code: (1) retrieves the text associated with the information selection from the external module file, (2) displays the information, and (3) continues on to the next step in the processing. Thus, making a "menu" selection advances the user to the next step in the code.

e. Hypertext Production. This processing step responds to the user request for information based on a "hypertext" selection within a block of text. As in "Information Production" (above), the module code: (1) retrieves the text associated with the information selection from the external module file and (2) displays the information. However, after the information has been examined, the "hypertext" selection step returns the user to the original display, not the next step in the processing.

f. External Text Files

(1) Module External Files. The information contained in the LOG PLANNER is subject to ongoing revision. To allow this information to be updated by the user to greatest extent possible, provision is made to separate this information from the module code, which is not accessible by the user. This is done by arranging the elements of information in the LOG PLANNER in a hierarchy of:

- Information Type - the highest level corresponding to selection of a module.
- Information Category - a subdivision of the module contents.
- Information Item - a particular information element containing the information of interest.

Access to the Information Type and Information Category elements is controlled directly by the module code. Access to the information items, however, is controlled by "hypertext menus" located in external files. These menus become part of the system when they are recovered from the file by the module code--but are otherwise available for revision by the user. A separate external file is provided for each module. Using this approach, it is possible to reorganize and update the Information Items within the system without a need to modify the module code. Modification of the module code is not allowed under the runtime licensing agreement.

(2) Additional External Files. Two additional external files are provided. One contains a "glossary" which is used by more than one module, and the other contains the information on POCs in the TAA process. This POC file is anticipated to require regular update and is therefore made self-contained to facilitate revision.

(3) Edit of External Files. As part of the Control Module code, provision is made for edit of the external files using a built-in system editor. This aspect of the system implementation is described in Chapter 5 as a feature of the system.

4-4. INDIVIDUAL MODULE DESIGN

a. The design of each individual module, following the generic module design, is shown in Figures 4-2 to 4-6. The figures identify each of the processing steps as a "Topic" in the generic design.

b. The topic notation and the information selection nomenclature used in the figures follow that used in the system code (see Appendix D). The information selection nomenclature in the figures corresponds to that used in the external text files associated with the module code (see Appendix E). Using these correlations, the appropriate points within the module code and/or external module text file can be located and examined in detail.

c. For a discussion of the concept of "topics," including the manner in which they are used to create the code and the manner in which they are processed during system operation, see Appendix G, Knowledge Processing Technology.

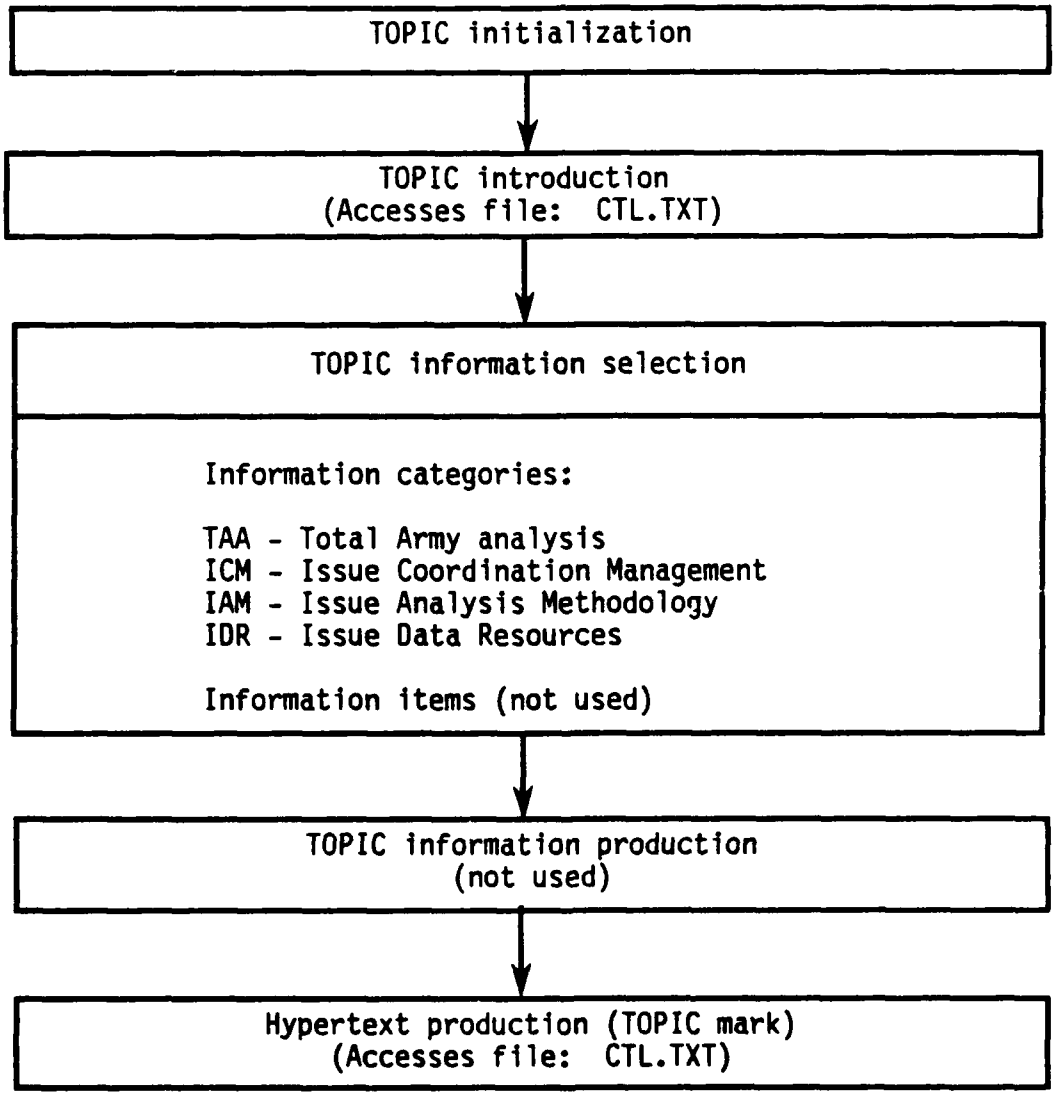


Figure 4-2. Control Module Topic Flow

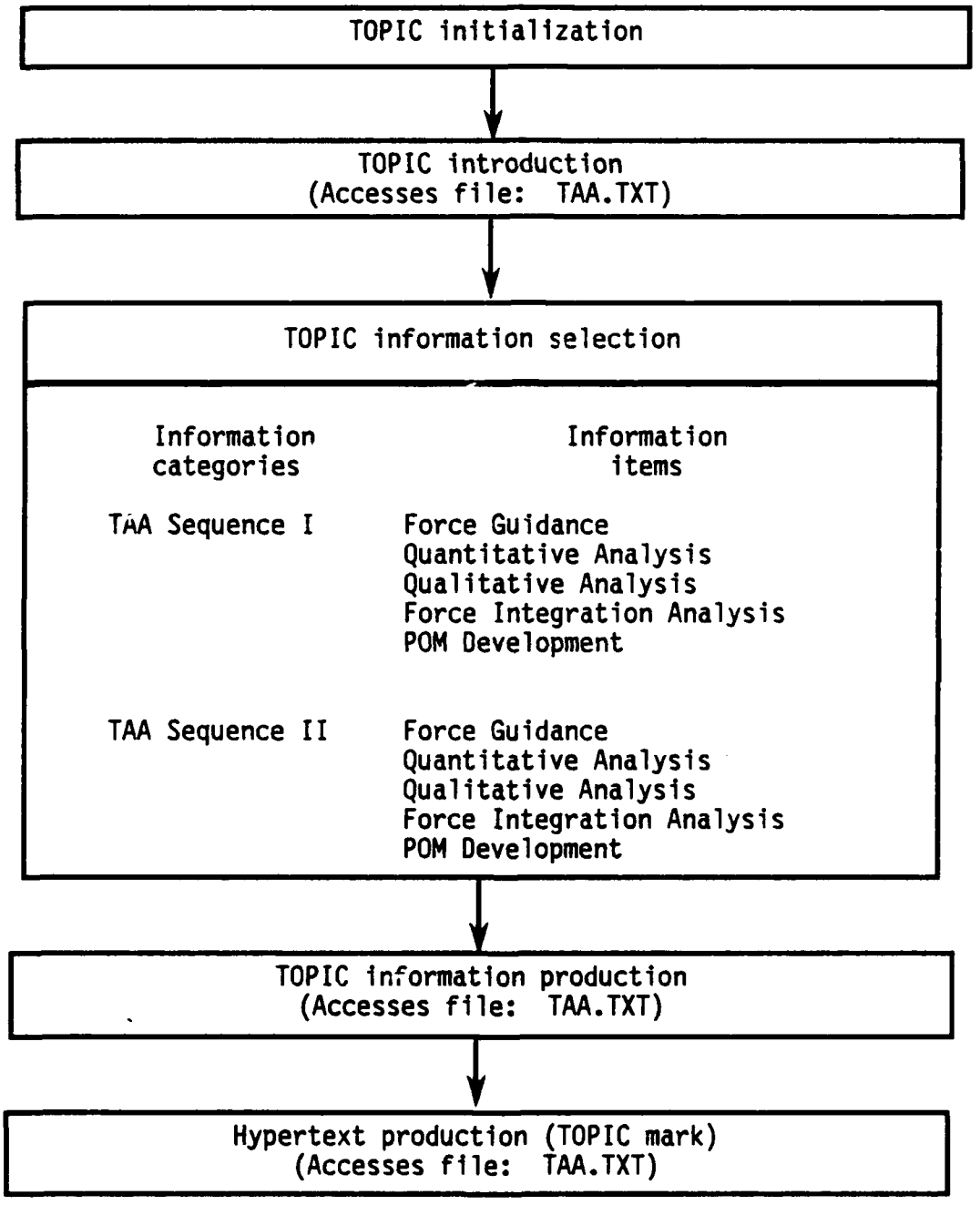


Figure 4-3. TAA Process Module Description Topic Flow

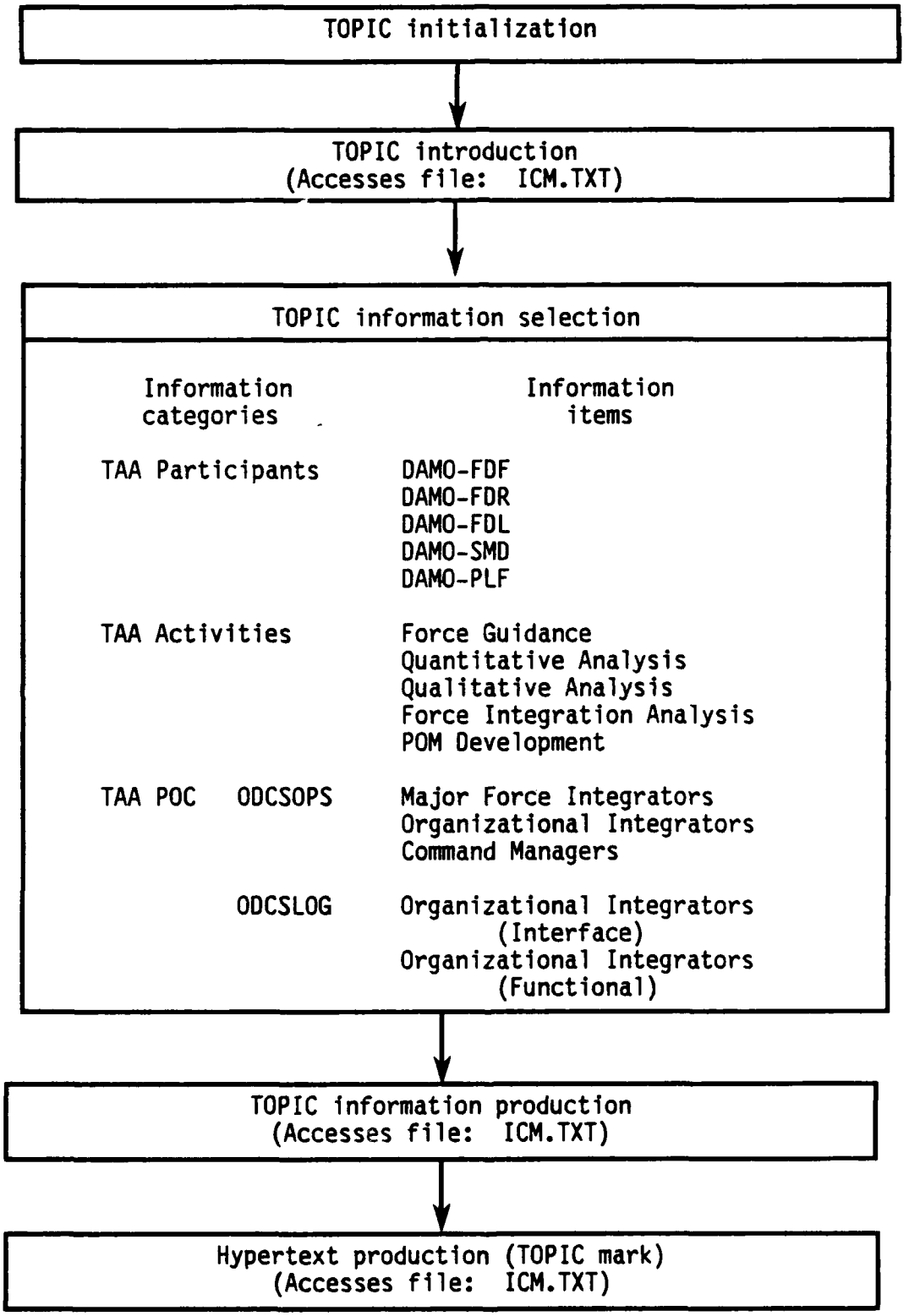


Figure 4-4. Issue Coordination Management Module Topic Flow

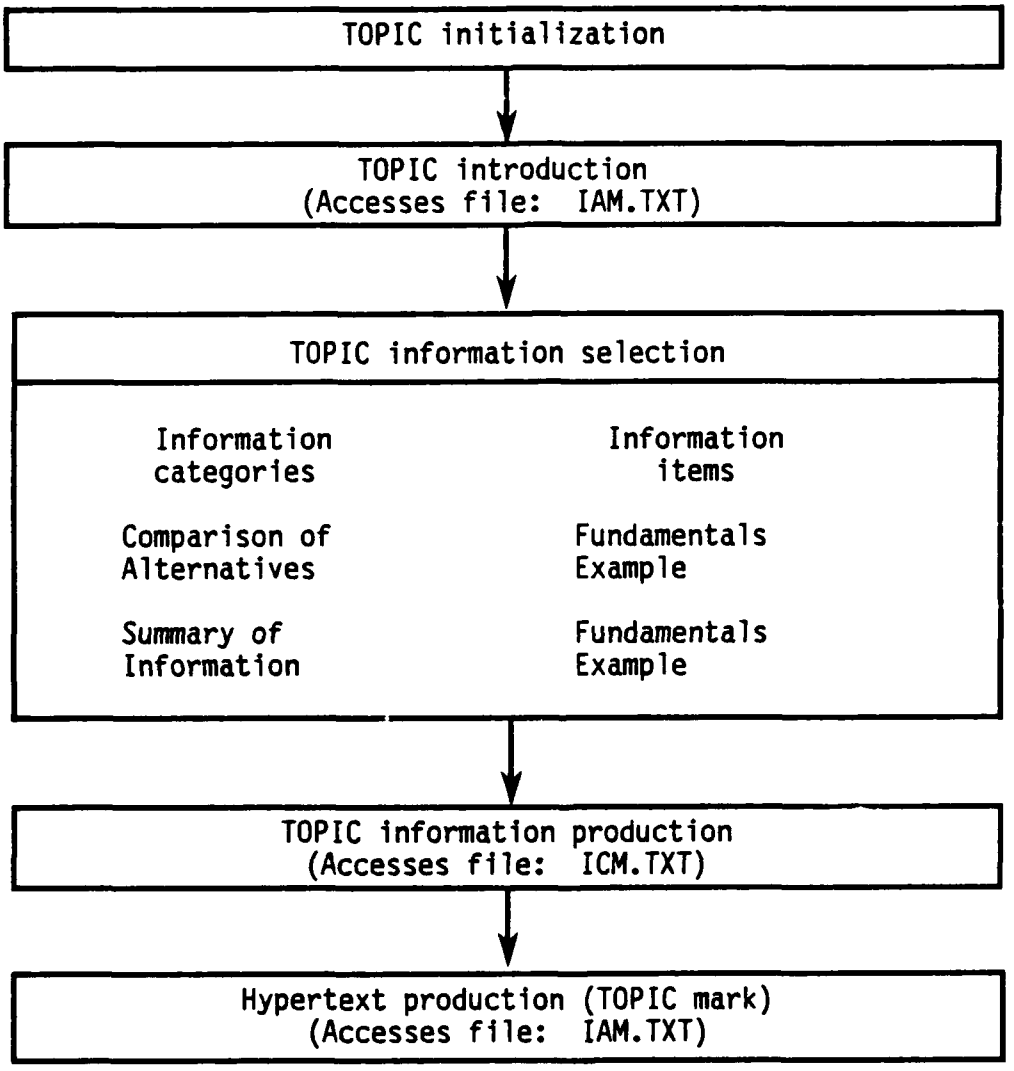


Figure 4-5. Issue Analysis Methodology Module Topic Flow

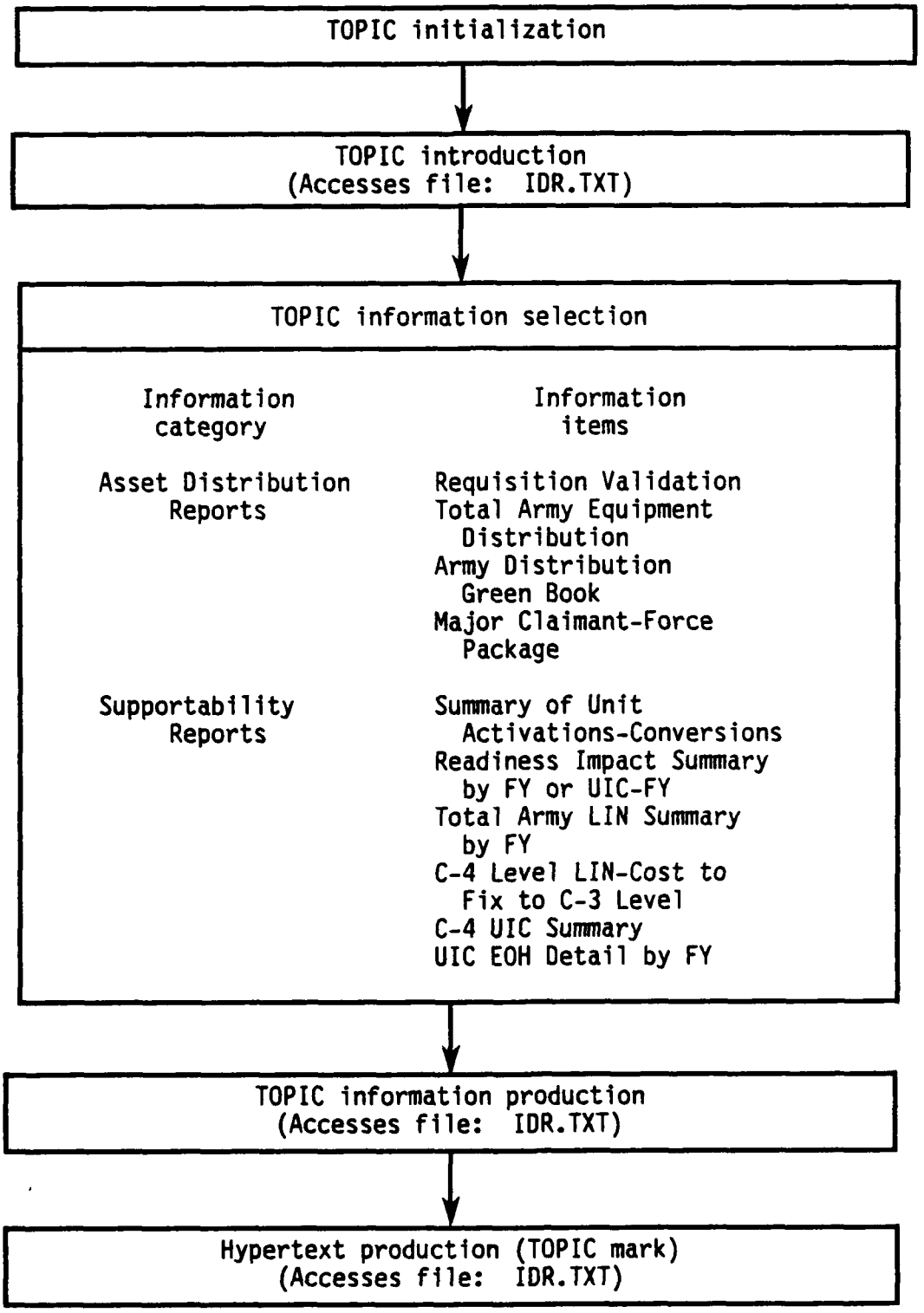


Figure 4-6. Issue Data Resources Module Topic Flow

4-5. INFORMATION DISPLAY PROTOCOL. This paragraph provides the conventions developed to govern the appearance of the displays generated by the LOG PLANNER. The purpose of the protocol is to provide uniformity in the appearance and continuity of the displays with respect to:

- Windowing - generation of screen windows to include location, size, color, titles, and layering.
- Color - use of color in display backgrounds and foregrounds.
- Information chunking - the partition of extended discussions into a series of screen-size pieces.

a. Windowing Convention. The information presented by the system is framed by a window generated on the monitor screen. The basic system window fills the entire monitor screen. A second, smaller window is used whenever subordinate information is presented.

b. Color Convention. The foreground of the window, namely the text and figure lines, is always presented in white. Two colors are used for the window background, blue and red. The blue background is used as a base color for the window. It is used when the module is initially accessed and the user is offered selections from a menu selection window. The red window background is used to identify secondary selections within a module. The red background is always used in conjunction with a second window opened over the primary window, to highlight the subordinate character of the information being displayed.

c. Information Chunking Convention. Information chunking refers to the process of reducing the information to be presented into a series of pieces of information (chunks) which will fit within the dimensions the window in use. The process used is similar to a briefing, which treats each topic on a separate slide. The subject development is broken down so that the material in each window is self-contained. To provide for the various types of information, two basic formats are used--a text page and a graphics page.

(1) Text Page. The text page is a window of exclusively text information and is organized as follows:

- The TITLE is above and below set in capitals, and space lines are provided to give emphasis to the subject under consideration.
- The individual paragraphs are of 2-5 lines in length and separated by space lines for emphasis.
- An instruction line is provided at the bottom of the page to guide the user through the sequence of text pages.

An example of a LOG PLANNER text page is shown in Figure 4-7.

TAA DESCRIPTION:

INTRODUCTION TO TOTAL ARMY ANALYSIS

TAA SEQUENCE I

Total Army Analysis (TAA) is defined, by regulation, as force structure development; that is, the derivation of the Army Program Force Structure through an analysis of the national military strategy, potential threats, doctrine, and available or projected resources.

The TAA process is organized into a quadrennial cycle of analysis and decisionmaking comprised of two 2-year subcycles of activity, identified herein as Sequence I and Sequence II.

Page 1 of 2 To EXIT - SPACE bar To READ - PgDn

Figure 4-7. Sample Text Page

(2) Graphics Page. The graphics page is a window which contains either a figure or table which is the principal focus of interest on the page. It occupies either the entire page or the major portion of it. Each line of the graphic occupies a full line on the monitor screen. Thus, even a small figure or table will tend to fill the available screen space. As in text page layout, the graphics page has both a title line and an instructions line, with the graphic proper occupying the center of the layout. An example of a LOG PLANNER graphics page is shown in Figure 4-8.

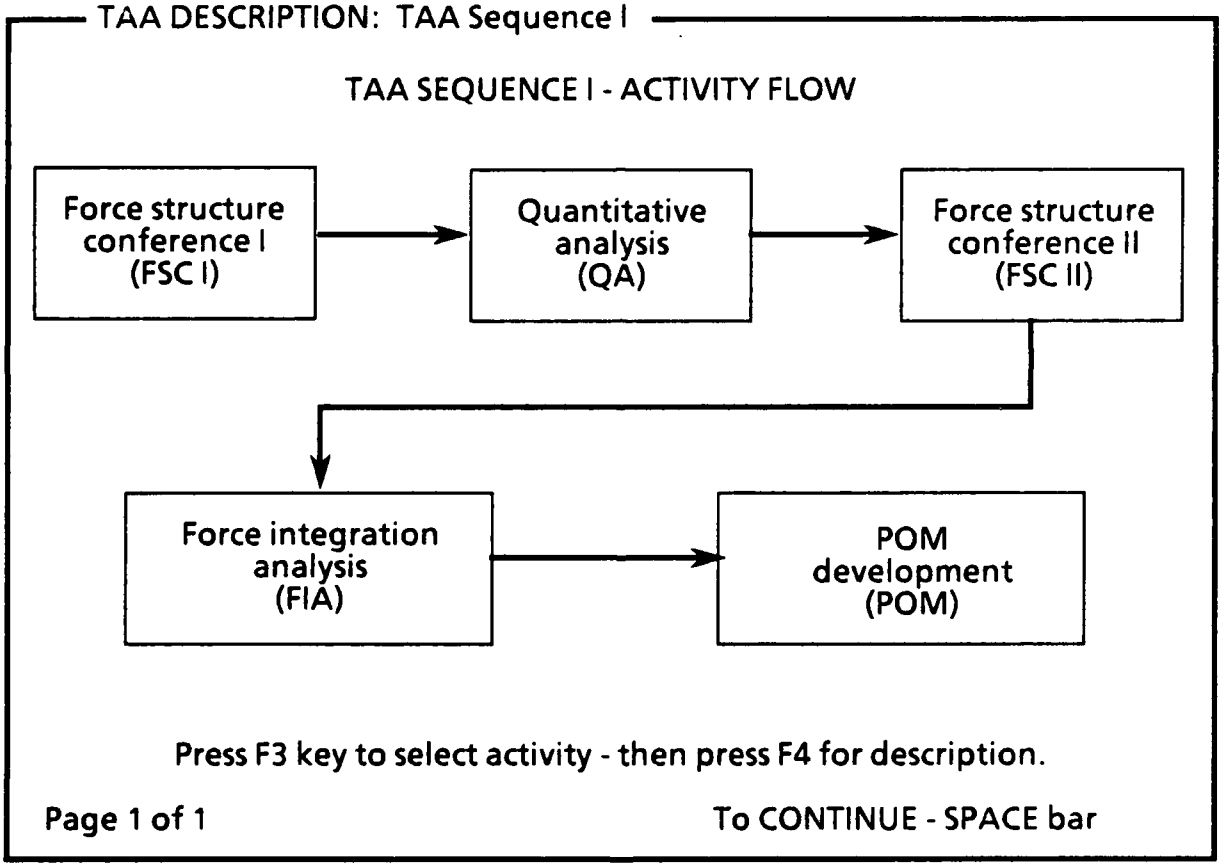


Figure 4-8. Sample Graphics Page

4-6. OVERALL SYSTEM DESIGN

a. Module Integration. The integration of the control module with the four information modules and their associated text files into an overall system is shown in Figure 4-9. As shown in the figure, the Control Module handles all access to the information modules. There is no direct transfer among the information modules.

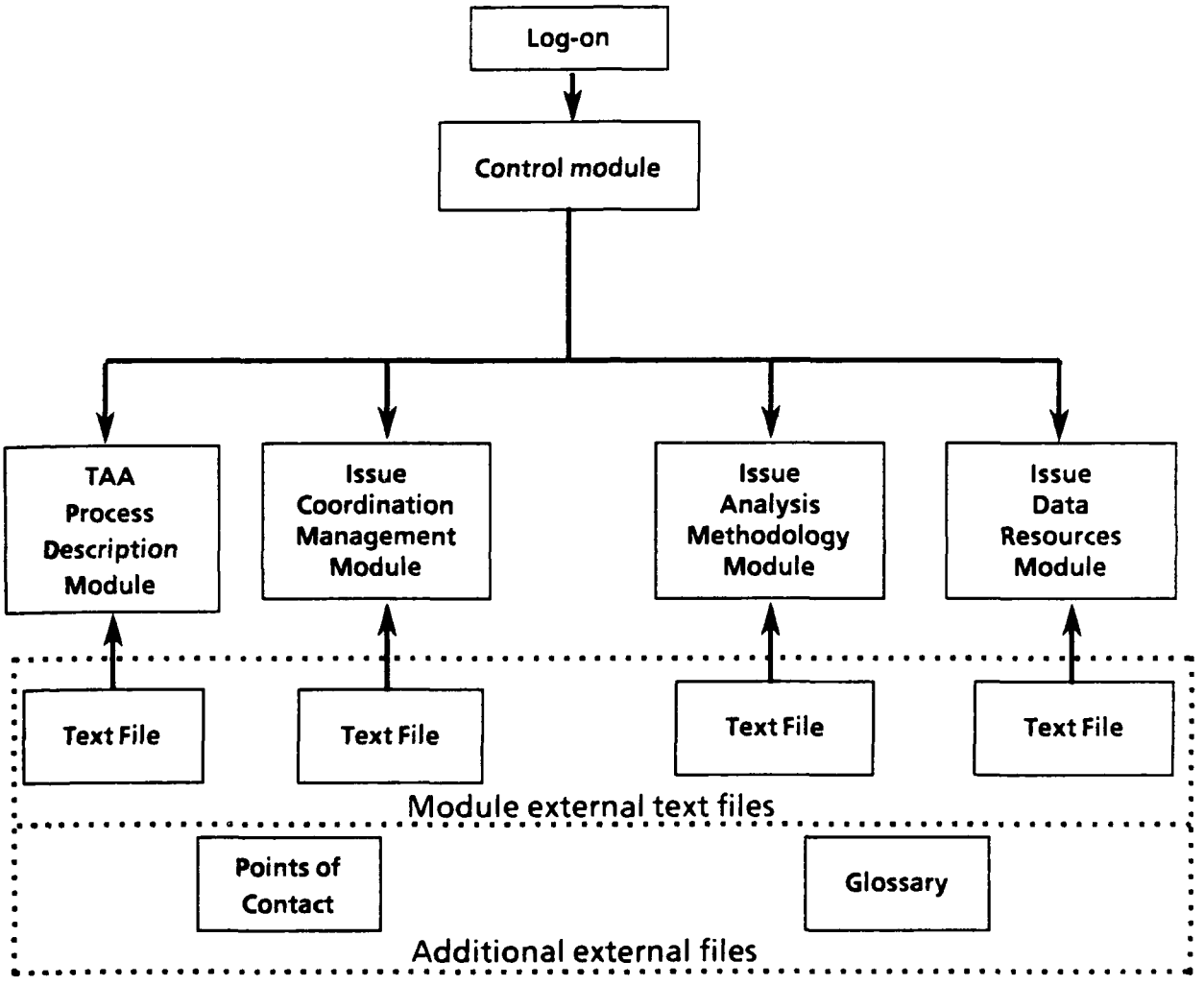


Figure 4-9. Overall System Design

b. External Text Files. As shown in Figure 4-7, a separate file is associated with each information module. As also shown in Figure 4-7, two additional external files are provided. One contains the "glossary" which is used by more than one module, and the other contains the information on points of contact (POC) in the TAA process. It is accessed as part of the operation of the Issue Coordination Management Module. The POC file is anticipated to require frequent update and is therefore made self-contained to simplify its revision. The size of each of the external files, expressed in terms of the number of screen pages each contains, is shown in Table 4-1.

Table 4-1. LOG PLANNER External Files

File name	Supports Module	Screen pages in file
TAA.TXT	TAA Description	29
ICM.TXT	Issue Coordination Module	24
POC.TXT	Issue Coordination Module (points of contact)	14
IAM.TXT	Issue Analysis Methodology	39
IDR.TXT	Issue Data Resources	28
GLS.TXT	Multiple modules (glossary)	4
	Total pages	138

4-7. SUMMARY. This chapter described the implementation of the system, as a set of modules, based on a generic design that provides for a standard sequence of processing. This standardization not only facilitates the system development, but also ensures that the user will experience a consistency in the manner in which information is requested and displayed.

CHAPTER 5

IMPLEMENTATION OF PLANNER FEATURES

5-1. INTRODUCTION. This chapter describes the special features incorporated into the LOG PLANNER. The features are: the provision of information on the use of the system; the provision of a tutorial capability to acquaint logistics planners with the information available from the system; and the provision of a built-in edit capability to allow authorized personnel to make changes in the information contained in the LOG PLANNER external files.

5-2. USE OF SYSTEM FEATURE. This feature provides the user with an introduction to the system operation. It is invoked by the user by the selection of "Use of LOG PLANNER" from the main system menu. To ensure that a novice user would consider making this selection, the system log-on message alerts the user to the availability of this option in the main menu. The use of the LOG PLANNER is covered in a six-page presentation which covers the following topics:

- Control of the LOG PLANNER - use of the keyboard to gain access to and inspect the information.
- Information available from the LOG PLANNER - the types of information available and typical uses for the information.
- LOG PLANNER tutorial mechanism - use of a built-in provision which guides the user through the basic information selections.

The information is arranged so that the user can scroll backward and forward through the pages for review purposes before exiting to normal operation of the system or, if desired, entering the tutorial mode of operation (see paragraph 5-3). The user can return to this introductory information at any time by making the "Use of LOG PLANNER" selection from the main system menu.

5-3. TUTORIAL FEATURE. This paragraph describes the implementation of the tutorial feature. The purpose of this feature is to acquaint logistics planner personnel with the overall operation of the system and the information available.

a. Guidelines. The tutorial capability for the system is implemented as an extension of the normal system operation. The following guidelines were followed in its implementation.

(1) Scope. The tutorial should expose the user to all the basic types of information available in the system.

(2) Design. The implementation should be technically simple, with as little impact as possible on the basic system design.

(3) Use. It should require as few specialized instructions for use as possible.

(4) Continuity. It should be forgiving of mistakes made during its execution.

b. Concept. The tutorial concept developed in response to the guidelines was that the tutorial should systematically step the user through all the information types and categories in the system and then allow the user to take control and examine the information items at will. This requires a total of nine automatically programmed steps to progress through the four information modules present. At each step, the user follows screen instructions to examine the individual information items available. The screen instructions include the procedure to exit the step, at which point the programmed selection again takes over.

c. **Implementation.** The implementation of the tutorial consists of:

(1) Arranging a special menu selection ("Tutorial Selection") which the user is directed to select in lieu of making any other menu selection as the means by which the system can sense the user's progress through the tutorial.

(2) Each time the "Tutorial Selection" is made, a "tutor counter" is advanced, and the next programmed selection is activated.

(3) The system continues to respond to the "Tutorial Selection" selection until the tutor count indicates that the last programmed selection has been completed, at which point a message is generated indicating that the tutorial is completed and the user is prompted to select the next operation (reenter tutorial, enter normal observation or exit).

d. Response to Guidelines

(1) Scope. The tutorial, as implemented, provides the user with exposure, via programmed and user control, to all the information available in the system.

(2) Design. From the system standpoint, only a flag, a counter, and a list of selections are needed in each module to implement the tutorial.

(3) Use. The user need only follow the "Tutorial Selection" on the menus to stay with the tutorial; no further instructions are required.

(4) Continuity. If the user makes a nontutorial selection, in error or otherwise, the system simply responds to that selection. The user may then return to the tutorial by making the "Tutorial Selection" and continue on without loss of continuity in the tutorial.

5-4. TEXT FILE EDITOR FEATURE. This paragraph describes the implementation of the text file editor feature.

a. Edit Mechanism. The LOG PLANNER shell technology (see Appendix G) includes commands which can be used to:

- Access a file.
- Edit its contents.
- Overwrite the old file contents with the new.

This sequence of commands is used to implement a built-in edit capability in LOG PLANNER. The sequence is invoked by a menu selection which queries the user for the file to edit. All the module text files may be edited, as shown in Table 5-1. In addition, as shown in the table, there is a "Glossary" file used by more than one module and a "Points of Contact" file which will require frequent update and is therefore kept separate from the other files. These files contain all the information of interest to the user.

Table 5-1. Editable LOG PLANNER Files

File content	File name
Control text	CTL.TXT
TAA Process Description text	TAA.TXT
Issue Coordination Management text	ICM.TXT
Issue Analysis Methodology text	IAM.TXT
Issue Data Resources text	IDR.TXT
Glossary text	GLS.TXT
Points of Contact text	POC.TXT

NOTE: The only file not available for edit is the one containing the system code in compiled form, the so-called "compiled" knowledge base. Being a compiled file, it cannot be directly edited. However, in the course of normal system activity, there should be no need to modify the compiled knowledge base.

b. Restricted Edit Access. In the interest of orderly system management, access to the editor has been purposely restricted. In normal system operation, users will not be aware that the edit capability is available. There is no reference to it in the menus or descriptive information. It is expected that only a specific individual, a SYSOP (system operator), will have both the authority and responsibility to modify the system text files. To implement this restricted access, the system editing capability has been disguised in a simple manner. To access the edit capability, the SYSOP will access the system in the usual manner. When presented with the main system menu, the SYSOP will depress the ENTER key three times in succession. This sequence, in effect, make a selection of the menu entry designated "Select Below" three times. This selection count is sensed by the code and causes the system to enter the edit mode.

c. Edit Mode. In the edit mode, the system presents the SYSOP with a menu selection for the editable files. Upon selection of a file, the system will invoke the editor which, in turn, will display the file contents. The

SYSOP, who is presumed to be familiar with the editor command set, will carry out the edit activity.

> **NOTE:** The edit command set is basically that used in the "WORDSTAR" word processor, or perhaps more familiarly, in the "SIDEKICK" memory resident utility. In addition, the F1 key can be used to display "HELP" information, as needed, about the operation of the editor.

Upon completion of the file edit activity, the SYSOP will exit the file. The system will then return to the edit select menu. Additional files may then be edited, or alternately, the SYSOP can exit the edit mode and return the system to normal operation.

5-4. SUMMARY. This chapter described the implementation of three features to expedite the use of the system. There is a tutorial feature which provides an introduction to the system operation; a tutorial feature which acquaints logistics planners with the operation of the system and the information available; and a feature which provides a built-in capability for edit of the system text files.

CHAPTER 6

PLANNER EVALUATION

6-1. INTRODUCTION. This chapter describes the activity conducted to evaluate the LOG PLANNER. The activity included the use of a demonstration as the evaluation mechanism; the demonstration of the system with selected personnel with logistics planning or related responsibilities; and the summary of the demonstration findings into an cverall assessment of system usefulness.

6-2. EVALUATION BY DEMONSTRATION. The information provided by the LOG PLANNER consists of displays of text and figures adapted from formal and informal Army documentation. The purpose of the evaluation is to assess the usefulness of the LOG PLANNER for its intended purpose of providing reference information to logisitics planners. This is largely a subjective matter, and demonstration of the system to logistics planners was taken as the most effective means for assessing its usefulness.

6-3. DEMONSTRATION OBJECTIVE. The objective of the demonstration was to assess the usefulness of the system as a source of logistics-related planning information.

6-4. DEMONSTRATION SCOPE. The scope of the demonstration consisted of trial uses of the system by selected ARSTAF and Log Center personnel with logistics responsibilities or interests (see Table 6-1). Each trial use examined each of the information types, categories, and items in each of the five information modules.

Table 6-1. Participating Offices

Office	Office title	Office symbol	Number of personnel
ODCSLOG	Concepts and Doctrine Div	DALO-PLF	1
ODCSLOG	Logistics Assessment Center	DALO-PLA	1
ODCSLOG	Support/Common Systems Div	DAMO-FDL	1
Log Center	Force Structure Div	ATCL-FS	3

6-5. SURVEY INSTRUMENT

a. Survey Factors. To assess the usefulness of the system, three basic factors were considered:

- Substance - how useful is the information presented? That is, how useful in terms of its subject matter, its breadth of coverage, and its level of detail?
- Form - how effectively is the material presented? That is, how clearly is the material worded, how clear is the terminology used, how extensive it the material, how well is it arranged, and are the graphics useful?
- Operation - how easy is to use the system? That is, how good are the instructions for operating the system, how convenient are the keyboard operations, is color used effectively?

b. Survey Questions. Part I of the survey instrument (Figure 6-1) consisted of a series of questions to solicit comments about each of the three factors. The questions associated with each factor are as follows:

Substance - Questions 1, 2, and 3

Form - Questions 4, 5, 6, 7, and 8

Operation - Questions 9, 10, 11, and 12

Each question was constructed using a three-level scale to capture the response. The levels were set to assess whether the system was "minimal" (below expectations), "nominal" (at or near expectations), or "maximal" (significantly above expectations).

c. Survey Comments. The survey was not intended to have a diagnostic capacity. That is, the responses to the questions did not provide insight into what could be done to make the system more useful. However, Part II of the survey instrument (Figure 6-1) provided space for making comments on improving the operation of the module. In addition, copies of the screen text were available for markup of any specific text corrections.

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED:	EVALUATOR:
	OFFICE:
	DATE:

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

___ Not Useful ___ Somewhat Useful ___ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

___ Too Narrow ___ About Right ____Too Broad

03. How complete is the DETAIL ?

___ Not Enough ___ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

___ Not Clear ___ Clear ___ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

___ Not Clear ___ Clear ___ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

___ Too Much ___ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

___ Poor Layout ___ Adequate Layout ___ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

___ Not Noticed ___ Effective ___ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

___ Not Clear ___ Clear ___ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

___ Not Useful ___ Somewhat Useful ___ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

___ Inconvenient ___ Convenient ___ Very Convenient

12. How effective is the use of COLOR in presenting material ?

___ Distracting ___ Not Noticed ___ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

Figure 6-1. Survey Instrument

6-6. CONDUCT OF DEMONSTRATION

a. Functions Examined. The LOG PLANNER has four information modules (accessed by a control module), each of which generates a different type of information. Within each module there are individual information categories selectable by the user. For demonstration purposes, each of the information types and their associated information categories were examined in the demonstration.

b. Tutorial Operation. The mechanism used for carrying out the demonstration was the system tutorial. As described in paragraph 5-3, the system tutorial is programmed to automatically guide the user through all the information types and categories in the system. The user then takes on the responsibility for requesting the individual information items within the information categories.

c. Items Examined. The number of LOG PLANNER information items examined during each demonstration, by information type and category, are summarized in Table 6-2. The table also indicates the figure in Chapter 4 which identifies the names of the individual information catgories and information items within the information type. It can be seen from Table 6-2 that each demonstration involves display of 39 information items. It should also be noted that, in general, an information item is a multipage presentation of information, averaging three pages in length.

Table 6-2. Information Examined

Information type	Information categories	Information items in categories	See Figure (Chapter 4)
TAA process description	2	10	4-3
Issue coordination management	3	15	4-4
Issue analysis methodology	2	4	4-5
Issue data resources	2	10	4-6
Total	9	39	--

6-7. DEMONSTRATION RESULTS

a. Demonstration Data. The individual survey forms are reproduced in Appendix H. It was noted in reviewing these forms that the responses checked off for the first module reviewed were repeated when the subsequent modules were reviewed. Only 8 responses out of the 240 responses provided on all the survey instruments departed from this pattern. It appears that once a reviewer assessed the first module, this response became the pattern for the response to the others. It was concluded that rather than representing that the results for each module are distinct, it would be more realistic to take

the first response as definitive and the others as simply derivative and therefore redundant for purposes of data analysis. Thus, the responses of each respondent are only presented for the first module reviewed (always the TAA Process Description). The responses for this module, aggregated by the survey factor (see paragraph 6-5a), namely, Substance, Form, and Operation, are shown in Table 6-3.

Table 6-3. Survey Results by Respondent

Office	Factor								
	Substance[a]			Form[a]			Operation[a]		
	Min	Nom	Max	Min	Nom	Max	Min	Nom	Max
ATCL-FS #1	0	2	1	0	1	4	0	1	3
ATCL-FS #2	0	2	1	0	4	1	0	2	2
ATCL-FS #3	0	2	1	1	3	1	0	2	2
DAMO-FDL	2	1	0	0	4	1	0	0	4
DALO-PLA	0	3	0	0	1	4	0	2	2
DALO-PLF	0	2	1	0	1	4	0	0	4
Total	2	12	4	1	14	15	0	7	17

[a]Number of responses at level indicated.

b. Results by Respondent. A review of the pattern of the respondent results provides the following insights:

(1) Only two minimal responses were reported by one respondant on the "Substance" factor. The respondent recorded that the scope and detail provided were "Not Enough."

(2) Only one minimal response was reported on the "Form" factor. The respondent recorded that he had "Not Noticed" whether the figures and graphics used in the module had contributed to the presentation of the material.

(3) For the "Substance" factor, the modal (most frequent) response was "Nominal."

(4) For the "Form" factor, there is essentially a bimodal response distributed between "Nominal" and "Maximal."

(5) For the "Operation" factor, the modal response is "Maximal."

c. Results by Factor. The results for each factor showing the percent from each level, are shown in Table 6-4. In addition, a column is added which totals the "Nominal" and "Minimal" responses to indicate the extent the system met or exceeded expectations on each factor.

Table 6-4. Survey Results by Factor

System aspect	Responses at			Total
	Minimal	Nominal	Maximal	Nom+Max
Substance	11%	67%	22%	89%
Form	3%	47%	50%	97%
Operation	0%	29%	71%	100%

d. Overall Results. Based on the results presented in Table 6-4, it is concluded that the utility of the LOG PLANNER was successfully demonstrated, noting specifically that:

(1) The LOG PLANNER is useful as a source of logistics-related planning information.

(2) The LOG PLANNER presents this information in an effective manner.

6-8. SUMMARY. This chapter described the activity conducted to assess the usefulness of the LOG PLANNER as a source of logistics-related planning information. From the demonstration results, the conclusion was drawn that the utility of the LOG PLANNER was successfully demonstrated.

CHAPTER 7

PLANNER STATUS

7-1. INTRODUCTION. This chapter summarizes the status of the LOG PLANNER system, as a study product, to accompany the study report. It includes descriptions of the changes to the module text files based on comments made during the course of the demonstration activity, the system hardware and software configuration, the system support needs, and the system documentation provided.

7-2. INFORMATION CHANGES. The information in the text files of the LOG PLANNER was updated with the following changes, based on comments received during the course of the demonstrations.

- Inclusion of descriptions of the computer modules run as part of "quantitative analysis" phase of TAA.
- Clarification of the roles of the organizational participants in the TAA process.
- Revision of the descriptions of the phases in the TAA process.
- Correction and elaborations of the terminology used in examples of the data reports and printouts in the Issue Data Resources Module text file.
- Addition of items to the system glossary text file.

7-3. CONFIGURATION NOTES

a. Hardware. The system requires a DOS-compatible machine with 512K memory (minimum) and a hard disk. Use of a machine with a type 80286 central processor, or later generation chip, is recommended to provide acceptable system response times.

b. Software

(1) Shell. The knowledge processing shell software needed to run the system is the runtime version of Knowledge Pro, developed by Knowledge Garden, Nassau, NY. The runtime software is provided by CAA, as system developer, and may be reproduced as needed without restriction. However changes to the runtime software can only be made by a party with a development version of the system.

(2) Application. The LOG PLANNER application consists of the (compiled) knowledge base and its associated text files. As with the runtime shell software, copies of the LOG PLANNER knowledge base and its associated text files may be made for distribution without restriction.

7-4. SYSTEM SUPPORT. The LOG PLANNER shares with other computer programs the need for ongoing support throughout its operational life. This is particularly the case for a program developed as an "assistant," where the planning process described and its associated activities, procedures, and participants may be expected to evolve. To remain useful, the information must be updated. To facilitate this updating, the text file editor feature in LOG PLANNER (see paragraph 5-4, Chapter 5) may be used to access and change the information in the text files.

7-5. SYSTEM DOCUMENTATION

a. System Code. The code for the LOG PLANNER is provided in Appendix D. The code is provided for information only, since the capability to recompile any changes to this code is limited to a party with a developer license from the vendor, Knowledge Garden. The LOG PLANNER knowledge base, however, should not need change until another information module is needed.

b. Module Text. The information in each of the external module text files for the system is shown in Appendix E. Each file is in a separate part of Appendix E, as shown in Table 7-1.

Table 7-1. Module Text Files

File name	Supports module	See Appendix E
CTL.TXT	Control	Part 1
TAA.TXT	TAA Process Description	Part 2
ICM.TXT	Issue Coordination Management	Part 3
POC.TXT	Issue Coordination Management (points of contact)	Part 4
IAM.TXT	Issue Analysis Methodology	Part 5
IDR.TXT	Issue Data Resources	Part 6
GLS.TXT	Multiple modules (glossary)	Part 7

c. User's Manual. A user's manual for the system has been prepared and is available as CAA Documentation CAA-D-89-4. A copy of the manual is shown in Appendix F. The manual describes the procedures for loading and initial operation of the system and use of the built-in text file editor.

7-6. SUMMARY. This chapter described the changes made in the LOG PLANNER information based on user comments during the demonstration, provided notes on the system hardware and software configuration, identified the need for system updates, and provided cross-references to system text file documentation in the appendicies.

APPENDIX A

STUDY CONTRIBUTORS

1. STUDY TEAM

a. Study Director

Mr. James J. Connelly, Force Systems Directorate

b. Team Member

Dr. Diego R. Roque

c. Other Contributors

Mr. Stuart J. Davis
Mr. Howard E. Whitehead

2. PRODUCT REVIEW BOARD

MAJ Ruth A. Williams, Chair
CPT Gregory T. Davis
Mr. Yong C. Park
Ms. Mai Do

3. EXTERNAL CONTRIBUTORS

a. Study Advisory Group

COL Keith Maxie, Office of the Deputy Chief of Staff for Logistics (Study Sponsor POC)
Mr. Robert Deslongchamps, Office of the Deputy Chief of Staff for Logistics
Mr. Donald Feeney, Office of the Deputy Chief of Staff for Logistics
Mr. Charles G. Fish, Logistics Center
MAJ Glenn Melton, Office of the Deputy Chief of Staff for Personnel
LTC John Scipione, Office of the Deputy Chief of Staff for Operations and Plans
Mr. Stanley Streenrod, Office of the Deputy Chief of Staff for Operations and Plans
MAJ John D. Taylor, Office of the Deputy Chief of Staff for Operations and Plans
Mr. Gerald Winters, Office of the Deputy Chief of Staff for Logistics
Ms. Dianna Woody, Office of the Deputy Chief of Staff for Logistics

b. Other Contributors

Ms. Karen Farren, Logistics Center
Ms. Ida Price, Logistics Center
Mr. William Drumlight, Logistics Center

APPENDIX B

STUDY DIRECTIVE

DEPARTMENT OF THE ARMY
OFFICE OF THE DEPUTY CHIEF OF STAFF FOR LOGISTICS
WASHINGTON, D.C. 20310-05

DALO-PLZ-A

14 MAR 1989

MEMORANDUM FOR DIRECTOR, U.S. ARMY CONCEPTS ANALYSIS AGENCY,
8120 WOODMONT AVENUE, BETHESDA, MD 20814-2797

SUBJECT: Logistics Force Planner Assistant (LOG PLANNER)

1. PURPOSE. This directive provides tasking, direction, and guidance for the conduct of the subject study.

2. BACKGROUND. Logistics force planning is concerned with the combat service support (CSS) units, including those Table of Distribution and Allowances (TDA) units, needed to sustain and maintain the combat units in the force. The planning activity for CSS units is carried out at two different levels, macro-analysis and microanalysis, each of which has a different focus. The macroanalysis activity focuses on development of the overall CSS structure and is carried out in conjunction with use of the Force Analysis Simulation of Theater Administrative and Logistics Support (FASTALS). The microanalysis activity focuses on individual CSS unit and equipment tradeoff situations which arise throughout the CSS structure programing activity. Where the macroanalysis activity is supported by the use of computer simulation (FASTALS), the microanalysis activity is carried out using essentially manual analysis of data, guided by on-the-job training and interaction with other staff and command elements involved in logistics planning. The ability to perform this analysis is adversely affected by both the lack of efficient information access, and at times, a lack of experience in the planning environment due to frequently shortened assignments of personnel. The microanalysis activity needs to be carried out in a more systematic and efficient manner and needs to be more readily transferable to newly assigned personnel. It is recognized that microcomputer technology can provide considerable assistance with the practice and transferability of CSS structure programing. In particular, knowledge process technology, including expert systems, is available as a framework within which to capture both the qualitative aspects of the activity in a form readily accessible to the planner personnel. The study directed herein will apply such technology to the development of a computer-based methodology to assist ODCSLOG personnel with the microanalysis of CSS structure programing.

3. STUDY SPONSOR AND SPONSOR'S STUDY DIRECTOR.

a. Sponsor: ODCSLOG

DALO-PLZ-A
SUBJECT: Logistics Force Planner Assistant (LOG PLANNER)

b. Sponsor Study Director: COL Keith Maxie, DALO-PLF, AUTOVON 224-6668.

4. STUDY AGENCY. U.S. Army Concepts Analysis Agency (CAA).

5. TERMS OF REFERENCE.

a. Terminology. The following terms, associated with knowledge processing and expert systems, are provided for reference.

o Knowledge Processing - Computer program which provides specific conclusions or results based on a search of a knowledge base. The search can involve both algorithmic and inference (expert system) strategies.

o Expert System - Computer program which uses a knowledge base and an inference search strategy to reach specific conclusions or results.

o Knowledge Base - A collection of knowledge about a particular subject area arranged for systematic exploration by a knowledge processing procedure.

b. Scope. The study will address the types of changes of CSS structure programing arising during the development and approval of the force structure from force guidance (Phase I) through the POM Lock (Phase IV).

c. Objective. Develop a computer-based methodology to assist logistics force planners with the microanalysis of CSS structure programing. The methodology will:

(1) Guide the user through the classification of the logistics problem and its relevant factors into terms compatible with the methodology.

(2) Identify sources of information relevant to the problem, indicate the principal elements of information needed, and the manner in which the elements can be used in the problem solution.

(3) Support the structuring and conduct of tradeoff analysis.

(4) Provide a tutorial explaining and illustrating the use of the methodology.

d. Timeframe. Planning, Programming, Budgeting and Execution System (PPBES) time horizon.

DALO-PLZ-A
SUBJECT: Logistics Force Planner Assistant (LOG PLANNER)

e. Limitations.

(1) The tradeoff analyses will be limited to the alternatives generated from guidance provided by higher authority or alternatives otherwise generated by the user.

(2) The selection from among the alternatives will be based on criteria provided by the user.

f. Essential Elements of Analysis.

(1) What are the types and sources of guidance, formal and informal, which direct the microanalysis of CSS structure programing?

(2) What data bases and computer model results are available to support microanalysis of CSS structure programing?

(3) What processes, both analytic and judgemental, are used in the microanalysis of CSS structure programing?

(4) How well does the study-developed, microcomputer-based methodology, guide the user through the microanalysis of CSS structure programing?

g. System Capabilities.

(1) The system will be a desk-top microcomputer. The necessary data interfaces will be implemented by manual data transfer, using keyboard input and/or diskette drives.

(2) The system will employ menus and the manual data interface to guide the user through a sequence of steps which set up and evaluate logistics trade-offs.

(3) The system will be suitable for operation by both experienced and entry-level logistics planners. The system response mode will be guided by the nature of the menu selections made by the user and the specific user requests for help or explanation.

h. Anticipated Benefits. Use of the system is anticipated to accomplish the following:

(1) Logistics planning policy and procedure will be captured in an automated form. This automated system of information will facilitate consistency and continuity in the planning of combat service support.

(2) The systemization of the planning provided by the automated system will more readily convey the rationale of the planning process to higher authority.

(3) The availability of the planning process in automated form will provide a mechanism for the ongoing refinement of the logistics planning process.

6. RESPONSIBILITIES.

a. Study Agency.

(1) Organize and conduct the activities necessary to develop the computer-based tool to support the logistics planning process.

(2) Participate in sponsor trials of the system.

(3) Update the system based on the results of the trials and convey the system to the sponsor.

(4) Prepare a report documenting the activity associated with the development and trial use of the system and including documentation of the system design.

b. Study Sponsor. (ODCSLOG)

(1) Provide coordinations for the study with appropriate ARSTAF and field activities.

(2) Establish and convene, as necessary, a Study Advisory Group (SAG).

(3) Review and approve the methodology and parameters incorporated into the system, including parameters from external data systems and models.

(4) Participate in trials of the system.

(5) Prepare an evaluation of the study results IAW AP 5-5.

c. Other Participants. Other participants, as represented on the SAG, will provide an ARSTAF/command perspective on the work in terms of its overall contribution to CSS structure programing.

7. LITERATURE SEARCH. No other studies directly related to the implementation of a formalized logistics planning process were found in the literature. Related studies are in progress, which

estimate the effects of logistics improvements on combat unit performance and the effects of equipment decrements on combat service support unit force structure.

8. REFERENCES.

a. Administrative.

(1) AR 5-5, Army Studies and Analysis.

(2) AR 10-38, Organization and Functions, U.S. Army Concepts Analysis Agency, 18 December 1985.

b. Substantive.

(1) AR 1-1, Planning, Programing, Budgeting and Execution System.

(2) AR 11-12, Logistics Priorities.

(3) AR 11-14, Logistics Readiness.

(4) AR 71-2, Basis of Issue (BOIP), Qualitative and Quantitative Personnel Requirements Information (QQPRI).

(5) AR 71-11, Total Army Analysis.

(6) AR 220-1, Unit Status Reporting.

(7) AR 700-9, Policies of the Army Logistics System.

(8) AR 700-90, Army Industrial Preparedness Program.

(9) AR 700-127, Integrated Logistic Support.

(10) DA PAM 700-127, Integrated Logistic Support Management Model.

(11) DA, The Army Plan (annual), SECRET.

(12) DA, Army Long Range Appraisal (annual), SECRET.

(13) DA, Long Range RDA Plan (annual), SECRET.

(14) CAA, Army Force Planning Data Planning and Assumptions (annual), SECRET-NOFORN.

DALO-PLZ-A
SUBJECT: Logistics Force Planner Assistant (LOG PLANNER)

9. ADMINISTRATION.

a. Funding. Funds required for TDY associated with study are the responsibility of each participant organization.

b. Milestone schedule. See enclosure 1.

c. Coordination Procedure. Direct coordination is authorized between CAA and ARSTAF elements (including the Logistics Evaluation Agency), HQ AMC, the AMC Materiel Readiness Support Activity, and the RAND Corporation.

d. Defense Technical Information Center (DTIC). The Study Agency will prepare and send DD Form 1498 and the final study documentation to DTIC.

E. Study Tasking Procedure. This study directive complies with the mission, functions, and procedures of the U.S. Army Concepts Analysis Agency and has been coordinated in accordance with paragraph 6, AR 10-38.

FOR THE DEPUTY CHIEF OF STAFF FOR LOGISTICS:

WILLIAM G. PAGONIS
Brigadier General, GS
Director of Plans
and Operations

Study Milestones

Activity	Completed by
Planner Definition	31 Mar 89
Planner Implementation	31 May 89
Planner Trials/Update	30 Jun 89
Draft Study Report and Log Planner System	31 Aug 89

APPENDIX C

REFERENCES

DEPARTMENT OF THE ARMY

Department of the Army (DA) Publications

1. Army Regulation (AR) 71-11, Total Army Analysis (under revision)

2. DA Pamphlet 5-9, Planning, Programming, Budgeting, and Execution System, 1 August 1986

Office of the Deputy Chief of Staff for Logistics

3. DSCLOG Regulation 10-1, Organization and Missions, September 1987

4. DF, DALO-PLF, Logistical Organizational Integrators Committee Listing, 21 January 1989

US Army Concepts Analysis Agency

5. Information Briefing, Total Army Analysis Process, undated

MISCELLANEOUS

6. Communications of the ACM, Special Issue: Hypertext, Vol 31, No. 7, July 1988

7. General Research Corporation, Equipment Distribution Module Users' Guide, Logistics Decision Support System, January 1989

8. Knowledge Garden Inc., Knowledge Pro User Manual, 1988

9. Saaty, Thomas L., Decision Making for Leaders, Lifetime Learning Publications, 1982

10. Norusis, Marija J., Introductory Statistics Guide, McGraw-Hill, 1983.

APPENDIX D

KNOWLEDGE BASE

D-1. INTRODUCTION. This appendix contains a listing of the code comprising the knowledge base of the LOG PLANNER. The listing is provided in five parts. Each part corresponds to a module in the knowledge base.

D-2. EXTERNALLY LOCATED CODE

a. It should be noted that the elements of information in the LOG PLANNER are arranged in a hierarchy of Information Type, Information Category, and Information Item.

b. Access to the Information Type and Information Category elements is controlled directly by the module code listed in this appendix.

c. Access to the Information Item elements is controlled by code in the form of "hypertext menus" located in external files. These menus become part of the system when they are accessed by the module code. Using this approach, it is possible to update the detailed information within the system without a need to modify the module code proper.

d. The externally located code and the information items they access are listed in Appendix E.

D-2. KNOWLEDGE BASE MODULES. The code for each of the system modules is documented in a separate part of the appendix, as shown in Table D-1.

Table D-1. Knowledge Base Modules

```
(* ------------------------------------------------------

                        LOG PLANNER
                  (Production Configuration)

   ------------------------------------------------------ *)

do (CONTROL_Module).
```

```
(* ------------------------------------------------------ *)
(* ------------------------------------------------------ *)

                    TOPIC CONTROL_Module.

(* ------------------------------------------------------ *)
(* ------------------------------------------------------ *)

collect_ok ().

do (initialize).
do (introduction).
do (information_selection).


(* ------------------------------------------------------ *)
                    TOPIC initialize.
(* ------------------------------------------------------ *)

close_message_window ().

control_name is 'LOG PLANNER'.
control_id is 'SHL'.
select_below_count is 0.
system_tutor_count is 0.
tutor_item is 'Select Below'.
tutorial is 'Not Selected'.
user_status is 'Experienced'.
window (?control_name,,blue,,1,1,78,23).

end.  (* initialize *)


(* ------------------------------------------------------ *)
                    TOPIC introduction.
(* ------------------------------------------------------ *)

unique_text is concat ('HYPER ','introduction').
file_text is read ('CTL.TXT',?unique_text,'/end').
say (?file_text).

end.  (* introduction *)


(* ------------------------------------------------------ *)
                  TOPIC information_selection.
(* ------------------------------------------------------ *)

ask ('#n#n
 What type of information is DESIRED?

      Use Up/Down ARROW keys to select,
      then press ENTER key',,
        [?tutor_item,
```

```
          ' ',
          'TAA-Total Army Analysis Process',
          'ICM-Issue Coordination Management',
          'IAM-Issue Analysis Methodology',
          'IDR-Issue Data Resources',
          ' ',
          'Use of LOG PLANNER',
          'Exit LOG PLANNER']).

if   ?information_selection is 'Select Below'
then select_below_count = ?select_below_count + 1 and
     if   ?select_below_count = 3
     then select_below_count = 0 and
          do (edit_select)
     else do (information_selection)
else select_below_count = 0.


if   ?information_selection is '*** Tutorial Selection ***'
then system_tutor_count is ?system_tutor_count + 1 and
     if   ?system_tutor_count = 1
     then information_selection is 'TAA-Total Army Analysis Process'
     else
     if   ?system_tutor_count = 2
     then information_selection is 'ICM-Issue Coordination Management'
     else
     if   ?system_tutor_count = 3
     then information_selection is 'IAM-Issue Analysis Methodology'
     else
     if   ?system_tutor_count = 4
     then information_selection is 'IDR-Issue Data Resources'
     else
     if   ?system_tutor_count = 5
     then do ('use of system').

if   ?information_selection is 'Use of LOG PLANNER'
then do ('use of system').

if   ?information_selection is 'Exit LOG PLANNER'
then do (quit).

linked_module_id is first (string_to_list (?information_selection,'-')).
linked_module_name is concat (?linked_module_id,'_Module').

do (?linked_module_name).

end. (* information_selection *)
```

```
(* ------------------------------------------------------ *)
                  TOPIC 'use of system'.
(* ------------------------------------------------------ *)

if   not (?system_tutor_count = 5)
then adjective is 'INTRODUCTORY' and
     unique_text is concat ('HYPER ','inexperienced user') and
     file_text is read ('CTL.TXT',?unique_text,'/end') and
     say (?file_text)
else adjective is 'TUTORIAL' and
     system_tutor_count is 0.

ask (['#s','#n#n
   This completes the',?adjective,'material.  At this point - #n
  select how you would like to proceed from the choices in the#n
  menu window.#n#n

        To SELECT - Use Up/Dn ARROW keys - then press ENTER'],
                          proceed,
                        ['Normal Operation',
                         'Operation in Tutorial Mode',
                         'Exit LOG PLANNER']).

if   ?proceed is 'Normal Operation'
then user_status is 'Experienced' and
     tutorial is 'Not Selected' and
     tutor_item is 'Select Above' and
     do (information_selection)
else
     if   ?proceed is 'Operation in Tutorial Mode'
     then user_status is 'Not experienced' and
          tutorial is 'Selected' and
          system_tutor_count is 0 and
          tutor_item is '*** Tutorial Selection ***' and
          unique_text is concat ('HYPER ','recap') and
          file_text is read ('CTL.TXT',?unique_text,'/end') and
          say (?file_text) and
          do (information_selection)
     else do (quit).

end.  (* 'use of system' *)
```

```
(* ------------------------------------------------------ *)
                    TOPIC mark (button).
(* ------------------------------------------------------ *)

if   ?button is 'TAA'
then window_name is 'Total Army Analysis Process'
else
     if   ?button is 'ICM'
     then window_name is 'Issue Coordination Management'
     else
          if   ?button is 'IAM'
          then window_name is 'Issue Analysis Methodology'
          else
               if   ?button is 'IDR'
               then window_name is 'Issue Data Resources'
               else window_name is ?button.

window (?window_name,,,,5,4,78,21).

unique_text is concat ('HYPER ',?button).
file_text is read ('CTL.TXT',?unique_text,'/end').
say (?file_text).
close_window ().
end. (* mark *)


(* ------------------------------------------------------ *)
                      TOPIC Glossary.
(* ------------------------------------------------------ *)

glossary_text is read ('GLS.TXT').
say (?glossary_text).
end. (* Glossary *)
```

```
(* ---------------------------------------------------------- *)
                  TOPIC edit_select.
(* ---------------------------------------------------------- *)

ask ('#n#tWhich file do you want to edit?

        o  Use editor as first operation after system load.
        o  Exit and reload system after each file edit.
        o  Use ESC to exit file WITH changes
        o  Use F10 to exit file AND system WITHOUT changes
        o  Use F1 for editor commands while editing
                                                              ',,

                      ['Select Below',
                       'CTL.TXT',
                       'TAA.TXT',
                       'ICM.TXT',
                       'IAM.TXT',
                       'IDR.TXT',
                       'GLS.TXT',
                       'POC.TXT',
                       'Exit Editor']).

if   not(?edit_select is 'Exit Editor')
then edit_file (?edit_select,,,,5,4,78,21) and
     do (edit_select)
else do (information_selection).

end.  (* edit_select *)


(* ----------------------------------------------------- *)
                    TOPIC quit.
(* ----------------------------------------------------- *)

stop ('#n#n#n#n#n
                         Session TERMINATED

                Press F10 key twice to return to DOS').
end.  (* quit *)
```

```
(* ------------------------------------------------------ *)
(* ------------------------------------------------------ *)

                    TOPIC TAA_Module.

(* ------------------------------------------------------ *)
(* ------------------------------------------------------ *)

do (initialize).
do (introduction).
do ('TAA Description').


(* ------------------------------------------------------------ *)
                        TOPIC initialize.
(* ------------------------------------------------------------ *)

module_name is 'TAA DESCRIPTION: '.
module_text is 'TAA.TXT'.
module_id is 'TAA'.

window (?module_name,,blue,,1,1,78,23).

if   ?tutorial is 'Selected'
then tutor_item is '*** Tutorial Selection ***' and
     tutor_count is 0
else tutor_item is 'Select Below'.

end.  (* initailize *)


(* ------------------------------------------------------------ *)
                        TOPIC introduction.
(* ------------------------------------------------------------ *)

if   ?user_status is 'Not experienced'
then file_text is read ('TAA.TXT','Introduction','/end') and
     say (?file_text).

end.  (* introduction *)


(* ------------------------------------------------------------ *)
                        TOPIC 'TAA Description'.
(* ------------------------------------------------------------ *)

do (information_selection).

do (information_production).

do ('TAA Description').

end.  (* 'TAA Description' *)
```

```
(* ------------------------------------------------------------ *)
                    TOPIC information_selection.
(* ------------------------------------------------------------ *)

ask ('

    A separate activity flow and activity description, keyed to
    the flow, is provided for Sequence I and Sequence II.

    Except where indicated, the activities in Sequence I and II
    are basically the same and described by a common text.

    Which sequence is of interest?

        Use Up/Dn ARROW keys to select sequence of interest -
        then press ENTER key.',,
             [?tutor_item,
              ' ',
              'TAA Sequence I',
              'TAA Sequence II',
              ' ',
              'Exit TAA Description']).

if   ?information_selection is '*** Tutorial Selection ***'
then tutor_count is ?tutor_count + 1 and
     if   ?tutor_count = 1
     then information_selection is 'TAA Sequence I'
     else
     if   ?tutor_count = 2
     then information_selection is 'TAA Sequence II'
     else
     if   ?tutor_count = 3
     then information_selection is 'Exit TAA Description'.

if   ?information_selection is 'Exit TAA Description'
then close_window and
     do ('CONTROL_Module:information_selection').

end. (* information_selection *)


(* ------------------------------------------------------------ *)
                    TOPIC information_production.
(* ------------------------------------------------------------ *)

window_name is concat (?module_name,?information_selection).
window (?window_name,,blue,,1,1,78,23).

unique_information_selection is concat ('HYPER ',?information_selection).
file_text is read (?module_text,?unique_information_selection,'/end').
say (?file_text).

close_window ().
```

```
end.  (* information_production *)


(* ------------------------------------------------------  *)
                    TOPIC mark (button).
(* ------------------------------------------------------  *)

window (?button,,,,5,4,78,21).

if   ?button is 'FSC I'
then if   ?information_selection is 'TAA Sequence I'
     then unique_button is concat ('HYPER ',?button,'-TAA1')
     else unique_button is concat ('HYPER ',?button,'-TAA2').

if   ?button is 'QA'
then if   ?information_selection is 'TAA Sequence I'
     then unique_button is concat ('HYPER ',?button,'-TAA1')
     else unique_button is concat ('HYPER ',?button,'-TAA2').

if   not (?button is 'FSC I') and
     not (?button is 'QA')
then unique_button is concat ('HYPER ',?button).

text is read (?module_text,?unique_button,'/end').
say (?text).

close_window ().

end.  (* mark *)

end. (* TAA_Module *)
```

```
(* ------------------------------------------------------ *)
(* ------------------------------------------------------ *)

                    TOPIC ICM_Module.

(* ------------------------------------------------------ *)
(* ------------------------------------------------------ *)

do (initialize).
do (introduction).
do ('ICM Description').


(* ------------------------------------------------------------ *)
                      TOPIC initialize.
(* ------------------------------------------------------------ *)

module_name is 'ISSUE COORDINATION MANAGEMENT: '.
module_text is 'ICM.TXT'.
module_id is 'ICM'.

window (?module_name,,blue,,1,1,78,23).

if   ?tutorial is 'Selected'
then tutor_item is '*** Tutorial Selection ***' and
     tutor_count is 0
else tutor_item is 'Select Below'.

end.  (* initailize *)


(* ------------------------------------------------------------ *)
                      TOPIC introduction.
(* ------------------------------------------------------------ *)

if   ?user_status is 'Not experienced'
then unique_button is concat ('HYPER ', 'Introduction') and
     file_text is read (?module_text,?unique_button,'/end') and
     say (?file_text).

end.  (* introduction *)


(* ------------------------------------------------------------ *)
                    TOPIC 'ICM Description'.
(* ------------------------------------------------------------ *)

do (information_selection).

do (information_production).

do ('ICM Description').

end. (* 'ICM Description' *)
```

```
(* ------------------------------------------------------------ *)
                    TOPIC information_selection.
(* ------------------------------------------------------------ *)

ask ('


  Which aspect of the management activities in the TAA process
  is desired ?


    To SELECT - Use Up/Dn Arrow keys, then press ENTER key.',,
            [?tutor_item,
             ' ',
             'TAA Participants',
             'TAA Activities',
             'TAA Points of Contact',
             ' ',
             'Exit Coordination Management']).

if   ?information_selection is '*** Tutorial Selection ***'
then tutor_count is ?tutor_count + 1 and
     if   ?tutor_count = 1
     then information_selection is 'TAA Participants'
     else
     if   ?tutor_count = 2
     then information_selection is 'TAA Activities'
     else
     if   ?tutor_count = 3
     then information_selection is 'TAA Points of Contact'
     else
     if   ?tutor_count = 4
     then information_selection is 'Exit Coordination Management'.

if   ?information_selection is 'Exit Coordination Management'
then close_window and
     do ('CONTROL_Module:information_selection').

end. (* information_selection *)


(* ------------------------------------------------------------------ *)
                      TOPIC information_production.
(* ------------------------------------------------------------------ *)

window_name is concat (?module_name,?information_selection).
window (?window_name,,blue,,1,1,78,23).

unique_information_selection is concat ('HYPER ',?information_selection).
file_text is read (?module_text,?unique_information_selection,'/end').
say (?file_text).
close_window ().

end.  (* information_production *)
```

```
(* ------------------------------------------------------ *)
                    TOPIC mark (button).
(* ------------------------------------------------------ *)

window (?button,,,,5,4,78,21).

unique_button is concat ('HYPER ',?button).

if   ?information_selection is 'TAA Points of Contact'
then file_text is read ('POC.TXT',?unique_button,'/end')
else file_text is read (?module_text,?unique_button,'/end').

say (?file_text).

close_window ().

end.  (* mark *)

end. (* ICM_Module *)
```

```
(* ------------------------------------------------------ *)
(* ------------------------------------------------------ *)

                    TOPIC IAM_Module.

(* ------------------------------------------------------ *)
(* ------------------------------------------------------ *)

do (initialize).
do (introduction).
do ('IAM Description').


(* ------------------------------------------------------------ *)
                      TOPIC initialize.
(* ------------------------------------------------------------ *)

module_name is 'ISSUE ANALYSIS METHODOLOGY: '.
module_text is 'IAM.TXT'.
module_id is 'IAM'.

window (?module_name,,blue,,1,1,78,23).

if   ?tutorial is 'Selected'
then tutor_item is '*** Tutorial Selection ***' and
     tutor_count is 0
else tutor_item is 'Select Below'.

end. (* initialize *)


(* ------------------------------------------------------ *)
                  TOPIC introduction.
(* ------------------------------------------------------ *)

if   ?user_status is 'Not experienced'
then file_text is read (?module_text,'Introduction','/end') and
     say (?file_text).

end.  (* introduction *)


(* ------------------------------------------------------------ *)
                    TOPIC 'IAM Description'.
(* ------------------------------------------------------------ *)

do (information_selection).

do (information_production).

do ('IAM Description').

end.  (* 'IAM Description' *)
```

```
(* ------------------------------------------------------------ *)
                    TOPIC information_selection.
(* ------------------------------------------------------------ *)

ask ('

       Select the methodology of interest or elect to exit
       this portion of the LOG PLANNER in the window below.



        To SELECT - Use Up/Dn ARROW keys, then press ENTER',,
              [?tutor_item,
               ' ',
               'Comparison of Alternatives',
               'Summary of Information',
               ' ',
               'Exit Analysis Methodology']).

if   ?information_selection is '*** Tutorial Selection ***'
then tutor_count is ?tutor_count + 1 and
     if   ?tutor_count = 1
     then information_selection is 'Comparison of Alternatives'
     else
     if   ?tutor_count = 2
     then information_selection is 'Summary of Information'
     else
     if   ?tutor_count = 3
     then information_selection is 'Exit Analysis Methodology'.

if   ?information_selection is 'Exit Analysis Methodology'
then close_window and
     do ('CONTROL_Module:information_selection').

end.  (* information_selection *)


(* ------------------------------------------------------------ *)
                    TOPIC information_production.
(* ------------------------------------------------------------ *)

window_name is concat (?module_name,?information_selection).
window (?window_name,,blue,,1,1,78,23).

unique_information_selection is concat ('HYPER ',?information_selection).
file_text is read (?module_text,?unique_information_selection,'/end').

say (?file_text).
close_window ().

end.  (* information_production *)
```

```
(* ------------------------------------------------------------ *)
                    TOPIC mark (button).
(* ------------------------------------------------------------ *)

unique_button is concat ('HYPER ',?button).
file_text is read (?module_text,?unique_button,'/end').
say (?file_text).

end.  (* mark *)

end. (* IAM_Module *)
```

```
(* ------------------------------------------------------  *)
(* ------------------------------------------------------  *)

                    TOPIC IDR_Module.

(* ------------------------------------------------------  *)
(* ------------------------------------------------------  *)

do (initialize).
do (introduction).
do ('IDR Description').


(* ------------------------------------------------------------ *)
                      TOPIC initialize.
(* ------------------------------------------------------------ *)

module_name is 'ISSUE DATA RESOURCES: '.
module_text is 'IDR.TXT'.
module_id is 'IDR'.

window (?module_name,,blue,,1,1,78,23).

if   ?tutorial is 'Selected'
then tutor_item is '*** Tutorial Selection ***' and
     tutor_count is 0
else tutor_item is 'Select Below'.

end. (* initialize *)


(* ------------------------------------------------------------ *)
                      TOPIC introduction.
(* ------------------------------------------------------------ *)

if   ?user_status is 'Not experienced'
then file_text is read ('IDR.TXT','Introduction','/end') and
     say (?file_text).

end. (* 'Introduction' *)


(* ------------------------------------------------------------ *)
                    TOPIC 'IDR Description'.
(* ------------------------------------------------------------ *)

do (information_selection).

do (information_production).

do ('IDR Description').

end.  (* 'IDR Description' *)
```

```
(* ------------------------------------------------------------ *)
                      TOPIC information_selection.
(* ------------------------------------------------------------ *)

ask ('
   The LOG DSS Equipment Distribution Module produces information
   products in two categories.

     o  ASSET DISTRIBUTION REPORTS - Reports providing details
          on the equipment assets of individual units.

     o  SUPPORTABILITY ANALYSIS REPORTS - Reports on unit equipment
          readiness, equipment shortfalls and "get-well" quantities,
          and unit activations, inactivations and conversions.

   Use Up/Dn ARROW keys to select category of interest -
   then press ENTER',,
                  [?tutor_item,
                   ' ',
                   'Asset Distribution Reports',
                   'Supportability Analysis Reports',
                   ' ',
                   'Exit Data Resources']).

if   ?information_selection is '*** Tutorial Selection ***'
then tutor_count is ?tutor_count + 1 and
     if   ?tutor_count = 1
     then information_selection is 'Asset Distribution Reports'
     else
     if   ?tutor_count = 2
     then information_selection is 'Supportability Analysis Reports'
     else
     if   ?tutor_count = 3
     then information_selection is 'Exit Data Resources'.

if   ?information_selection is 'Exit Data Resources'
then close_window and
     do ('CONTROL_Module:information_selection').

end.  (* information_selection *)


(* ------------------------------------------------------------------ *)
                       TOPIC information_production.
(* ------------------------------------------------------------------ *)

window_name is concat (?module_name,?information_selection).
window (?window_name,,blue,,1,1,78,23).

unique_information_selection is concat ('HYPER ',?information_selection).
file_text is read (?module_text,?unique_information_selection,'/end').
say (?file_text).
```

```
close_window ().

end.  (* information_production *)


(* ------------------------------------------------------------ *)
                      TOPIC mark (button).
(* ------------------------------------------------------------ *)

window (?button,,,,5,4,78,21).

unique_button is concat ('HYPER ',?button).
file_text is read (?module_text,?unique_button,'/end').
say (?file_text).

close_window ().

end.  (* mark *)

end. (* IDR_Module *)

end.  (* CONTROL_Module *)
```

APPENDIX E

MODULE INFORMATION FILES

E-1. INTRODUCTION. This appendix contains a copy of each of the external text files and the code associated with it. The files are provided for reference only, to facilitate the understanding of the organization and operation of the LOG PLANNER. They are not intended as a permanent record of the files, in that the file content is anticipated to undergo revision with ongoing use of the system.

E-2. MODULE INFORMATION FILES. The information (text) files for the system modules are documented in separate parts of the appendix, as shown in Table E-1.

Table E-1. Module Information Files

(THIS PAGE INTENTIONALLY LEFT BLANK)

PART I. CONTROL

HYPER introduction

" LOGISTICS FORCE PLANNER ASSISTANT "

PURPOSE: This system supports logistics action officer participation in the Total Army Analysis (TAA) process - the process used to generate and formally approve the Army force structure.

INFORMATION: The system provides:
- o Description of the TAA process,
- o Information on the coordination of TAA issues,
- o Methodologies for analysis of TAA issues, and
- o Identification of data reports to assist analysis of the equipment readiness and supportability of the approved force.

USE: Follow the system menu selections and prompts to navigate through the system. An inexperienced user may select the 'Use of LOG PLANNER' option from the menu on the next page for further information, including access to the system tutorial.

To CONTINUE - Press SPACE bar

/end

HYPER inexperienced user

USE OF THE LOG PLANNER

The use of the LOG PLANNER is covered under three topics in this section, namely

- o CONTROL OF THE LOG PLANNER - Use of the keyboard to gain access to and inspect the information.
- o INFORMATION AVAILABLE FROM LOG PLANNER - The types of information available and typical uses for the information.
- o LOG PLANNER TUTORIAL MECHANISM - Use of a built-in provision which guides the user through the basic information selections.

Each of these topics is indivdually described in the following pages, which may be accessed by using the PgUp and PgDn keys.

Page 1 of 6 To EXIT - SPACE bar To READ - PgDn #p

CONTROL OF THE LOG PLANNER

The following types of CONTROL are provided.
For a description of the use of the keys,
press the F3 key to select type - then press F4.

- o (#mSPACE#m) Use of SPACE bar
- o (#mARROW#m) Use of Up/Dn ARROW keys
- o (#mUp/Dn#m) Use of PgUp/PgDn keys
- o (#mF3/F4#m) Use of F3/F4 keys

Note the use of the F3/F4 & PgUp/PgDn keys
to control this introductory material

INFORMATION AVAILABLE FROM LOG PLANNER

The following types of INFORMATION are available.
For a description of the information type and its uses,
press the F3 key to select type - then press F4.

- o (#mTAA#m) Total Army Analysis Process
- o (#mICM#m) Issue Coordination Management
- o (#mIAM#m) Issue Analysis Methodology
- o (#mIDR#m) Issue Data Resources

LOG PLANNER TUTORIAL MECHANISM

The LOG PLANNER has a tutorial mechanism which directs the user through all of the basic information selections in LOG PLANNER.

The user activates and controls the pace of the selections by pressing the 'ENTER' key each time a menu is presented. This activitates the first selection on the menu which is identified as:

*** Tutorial Selection ***

The LOG PLANNER then translates this into an actual menu selection and presents the response to this selection. By pressing the ENTER key each time a menu is offered, the user causes the LOG PLANNER to systematically work its way through all the basic information types available in the system.

(Cont'd)

LOG PLANNER TUTORIAL MECHANISM (cont'd)

The 'Tutorial Selection's presented by the PLANNER direct the user to specific types of information. The user, however must then make the selections of the information within the type.

This is done by following the screen instructions These instructions involve use of the keys, described earlier on Page 2, for 'CONTROL OF THE LOG PLANNER'.

It is always possible to depart from the 'Tutorial Selection' and make another menu selection. Should the user then decide to return to the tutorial process, the PLANNER will pick-up where it left off in the tutorial sequence.

The user can depart as often as desired, but must keep in mind an 'EXIT' menu selection terminates any further tutorial operation in the 'EXITed' module.

END OF INTRODUCTORY MATERIAL

This completes the LOG PLANNER introductory material. You may wish to rescan the material, using the PgUp/PgDn keys, before you exit this material.

After you EXIT this screen, the next screen will ask you how you want to proceed, and offer you the (3) choices of:

- o NORMAL OPERATION - in this mode, the user is presented with menus - no introductory material is displayed to guide selections.
- o TUTORIAL MODE - the user is guided to the choice of menus and introductory material is displayed to guide selections.
- o EXIT LOG PLANNER - self explanitory.

Page 6 of 6 To EXIT - SPACE bar To READ - PgUp

/end

HYPER recap

TUTORIAL RECAP

- o Recall that the tutorial is paced by the your making the '*** Tutorial Selection ***' selection each time a menu window is present.
- o If no menu window is present, follow the page control instructions at the bottom of the text or page.
- o When viewing text, recall that all highlighted text is hypertext and will respond to activation by the F3/F4 keys.
- o Also recall that you may depart from the tutor sequence by simply making another menu selection.
- o Do not make an 'EXIT' selection unless you wish to forgo all the choices available in the current module.

Page 1 of 1 To CONTINUE - SPACE bar

/end

HYPER SPACE

USE OF SPACE BAR

The SPACE bar (long bar at bottom of keyboard) is used to advance to the next segment of system operation, usually a menu selection. Use of the space bar in identified as follows:

To CONTINUE - SPACE bar

or To EXIT - SPACE bar

The 'To CONTINUE' form is used when there is only a single page of material available for review.

The 'To EXIT' form is used when there are several pages available for review and the 'To CONTINUE' could conflict with the 'To READ' instruction which is also present.

Page 1 of 1 To CONTINUE - Space Bar
/end

HYPER ARROW

USE OF THE UP\DN ARROW KEYS AND ENTER

- The Up/Dn ARROW keys (right side, keypad, No 8 and No 2) are used to move the selection cursor in the menu window up and down.
- When the desired selection is under the cursor, the ENTER key is pressed to activate the selection.
- When a memu window is present only the ARROW keys will respond, the rest of the keyboard (except the ENTER key) is deactivated.

Page 1 of 1 To CONTINUE - Space Bar
/end

HYPER Up/Dn

USE OF THE PgUp/PgDn KEYS

- The PgUp and PgDn keys (right side, keypad, No 9 and No 3) are used to scroll individual pages of a set of pages onto the screen.
- The pages may be scrolled forward using the PgDn key and scrolled backward using the PgUp key.
- The pages remain available for inspection until the SPACE bar is used to move onto the next segment of the material.

Page 1 of 1 To CONTINUE - Space Bar

/end

HYPER F3/F4

USE OF THE F3 AND F4 KEYS

- The function keys F3 and F4 are used in a special way, as you have seen in using them to access this material.
- They function only in conjuction with text on the screen which has been especially highlighted during the text creation process. The text so highlighted is referred to as 'hypertext.' In conjunction with the use of F3 and F4, it can be used to immediately access information related to the highlighed text.
- The 'hypertext' feature is used in two ways. (1) For menu selection and (2) for access related information.
- In either case, F3 is used to select the item of interest and F4 then activates the information in a separate window. Use of the SPACE bar clears this window and returns the original text to the screen, as you will note when you leave this page.

Page 1 of 1 To CONTINUE - SPACE bar

/end

HYPER TAA

TAA PROCESS DESCRIPTION MODULE

Description of the multi-year sequence of events which occur in the development and review of the Army force structure.

USES:

- o Familiarization with overall TAA process.
- o Context for other information available from the LOG PLANNER.

Page 1 of 1 To CONTINUE - SPACE bar
/end

HYPER ICM

ISSUE COORDINATION MANAGEMENT MODULE

A summary of the participants, activities and points of contact associated with the conduct of the TAA process.

USES:

- o Identification of sources of information and functional expertise.
- o Reference for nature and timing of TAA activities.
- o Guide in preparation of action messages and reports.

Page 1 of 1 To CONTINUE - SPACE bar
/end

HYPER IAM

ISSUE ANALYSIS METHODOLOGY MODULE

Descriptions of techniques available for analysis and review of questions which arise in the TAA Process.

USES:

- o Summary of information about the structure and composition of the force.
- o Structuring and evaluating alternatives for "Billpayer" units.
- o Analysis of distributions of types of TAA issues and extent to which the issues have been resolved.

Page 1 of 1 To CONTINUE - SPACE bar
/end

HYPER IDR

ISSUE DATA RESOURCES MODULE

Provides user with information on the data resources available from the ODCSLOG Logistics Decision Support System (LOG-DSS).

USES:

- o Identify item and unit equipment distributions using LOG-DSS 'Asset Distribution Reports'.
- o Identify item and unit equipment shortfalls and 'get well' costs using LOG-DSS 'Supportability Analysis Reports'.

Page 1 of 1 To CONTINUE - SPACE bar
/end

PART 2. TAA PROCESS DESCRIPTION

HYPER Introduction

INTRODUCTION TO TOTAL ARMY ANALYSIS

Total Army Analysis (TAA) is defined, by #mregulation#m, as force structure development; that is, the derivation of the Army Program Force Structure through an analysis of the national military strategy, potential threats, doctrine, and available or projected resources.

The TAA process is organized into a quadrennial cycle of analysis and decision making comprised of two, 2-year sub-cycles of activity.

Page 1 of 2 To EXIT - SPACE bar To READ - PgDn #p

INTRODUCTION TO TOTAL ARMY ANALYSIS (Cont'd)

The first sub-cycle starts in an even calendar year (such as 1986). It is considered the baseline year, in that it initiates a development which takes into account a full reconsideration of the force structure. The cycle consists of five, sequential, activities which produce a POM Force for budgetary action.

The second sub-cycle in the following even calendar year (such as 1988). It differs from Sequence I, in that the activities refine the baseline results of the prior cycle using well-defined excursions from the baseline scenarios, rather than completely reconsidering the force. Again, the cycle consists of five activities which produce the POM Force for budgetary action.

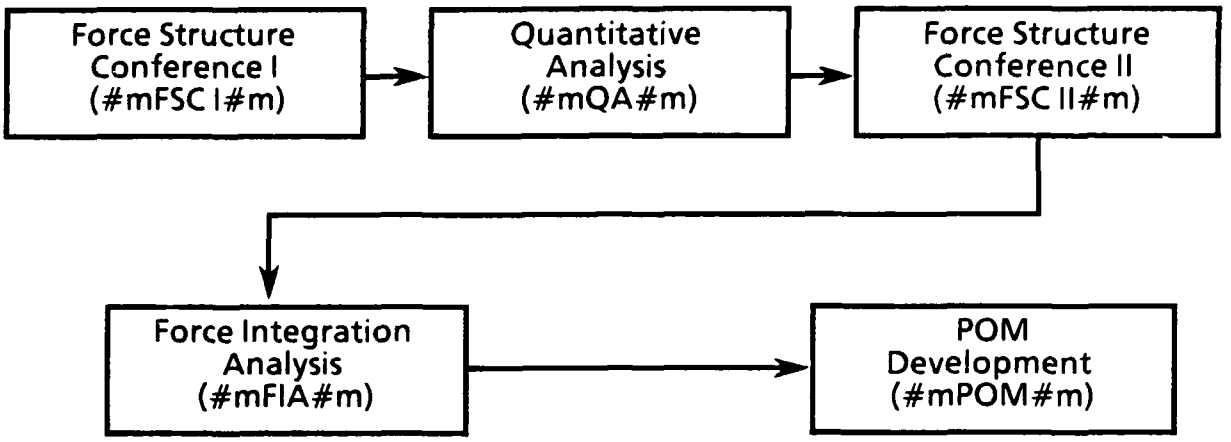
With the conclusion of the second sub-cycle, the quadrennial TAA process starts again.

Page 2 of 2 To EXIT - SPACE bar To READ - PgUp

/end

HYPER TAA Sequence I

TAA SEQUENCE I - ACTIVITY FLOW



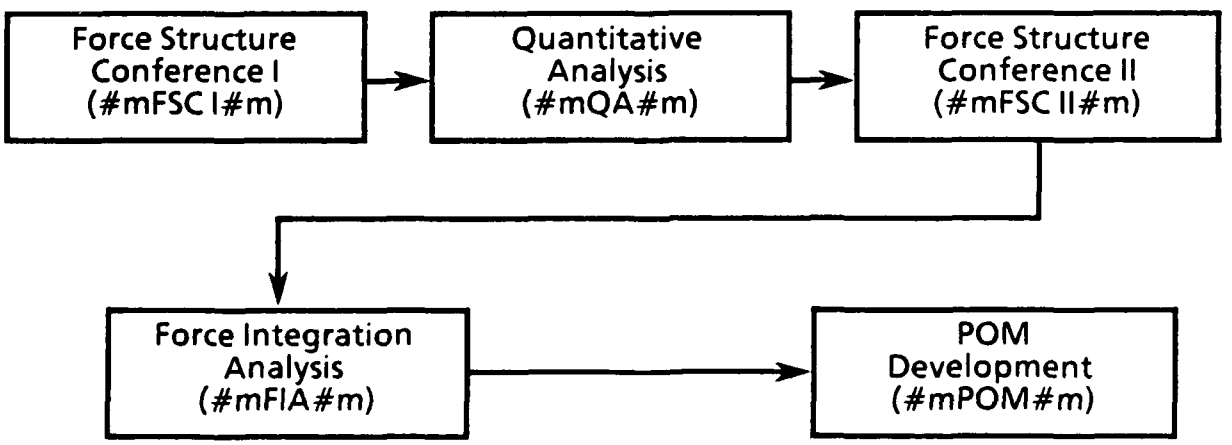
FOR DESCRIPTION - Press F3 to SELECT, press F4 to DISPLAY

Page 1 of 1 To CONTINUE - SPACE bar

/end

HYPER TAA Sequence II

TAA SEQUENCE II - ACTIVITY FLOW



Page 1 of 1 To CONTINUE - SPACE bar

/end

HYPER FSC I-TAA1

FORCE STRUCTURE CONFERENCE I - ACTIVITY

Force Structure Conference I activities consist of the update and quality control of the force development data base, workload planning factors, and allocation rules, in preparation for the Baseline Run Quantitative Analysis. This is done with participation of the Army Staff (ARSTAF), the Major Army Commands (MACOMs) and the Integrating Centers and Schools.

The conference includes review of the force sizing guidance provided in the Defense Guidance (DG), The Army Plan (#mTAP#m) and the Army Force Planning Data and Assumptions (AFPDA).

Other considerations include analysis of the threat, host nation support and the logistics civil augmentation program (LOGCAP).

Page 1 of 2 To EXIT - SPACE bar To READ - PgDn #p

FORCE STRUCTURE CONFERENCE I - MILESTONES

- o Force Structure Conference I - Reviews and recommends approval of allocation rules and the AFPDA.
- o Council of Colonels I - Resolves issues related to the allocation rules and AFPDA and/or makes recommendations to the General Officers Steering Committee.
- o General Officers Steering Committee I (GOSC I) - Provides guidance as required. Recommends approval of the analysis assumptions and the plan of analysis for the ensuing Quantitative Analysis phase.

Page 2 of 2 To EXIT - SPACE bar To READ - PgUp

/end

HYPER QA-TAA1

QUANTITATIVE ANALYSIS ACTIVITY

Quantitative analysis consists of force deployment and warfighting simulations and analyses to determine force structure requirements.

Using the input provided for by the force guidance and results of FSC I, the Concepts Analysis Agency (CAA) uses #mcomputer models#m to conduct the Support Requirements Analysis (SRA). This analysis involves warfighting simulations and analyses to determine time-phased, balanced, and geographically distributed force structure requirements. Complete theater level campaigns are run using the Illustrative Planning Scenario. These simulations encompass NATO, SWA and NEA force analysis.

The output is the DESIGN FORCE and associated analyses which are used as input to an ensuing qualitative analysis to establish the BASE FORCE.

Page 1 of 1 To CONTINUE - SPACE bar

/end

HYPER FSC II

FORCE STRUCTURE CONFERENCE II - ACTIVITY

Force Structure Conference II is held to review MACOM and HQDA inputs, changes, and additions to the DESIGN FORCE. Constraints such as end-strength guidance, stationing requirements, and affordability and supportability considerations are applied. The results of the conference are reviewed by the MACOMs and the ARSTAF, who then develop the related issues and recommended changes.

During the reviews associated with the development of the BASE FORCE, near-term (OMNIBUS) analyses are also conducted to identify critical force structure deficiencies and readiness capabilities in the current year forces.

Page 1 of 3 To EXIT - SPACE bar To READ - PgUp/PgDn #p

FORCE STRUCTURE CONFERENCE II - REVIEWS

Once the recommended modifications have been finalized, they are reviewed by an O-6 Ranking Committee, and initial lists of claimants (end-strength increases) and bill-payers (end-strength decreases) for each component (COMPO) of the Army (Active, Guard, and Reserve) are developed. These lists ensure that end-strength changes are offset by an identifiable bill-payer.

The TAA General Officer Steering Committee (GOSC) meets to review the bill-payer and claimant lists and the issue/recommendations raised by the MACOMs and the ARSTAF. GOSC recommendations are considered at the Force Program Review (FPR), chaired by the VCSA, and the resultant proposed BASE FORCE is forwarded to the CSA for approval.

Page 2 of 3 To EXIT - SPACE bar To READ - PgUp/PgDn #p

FORCE STRUCTURE CONFERENCE II - MILESTONES

- The Conference and Council of Colonels act to resolve MACOM and other Army TDA and TOE issues by reconciling accepted claimants and billpayers and/or forwarding their recommendations to the General Officer Steering Committee.
- General Officer Steering Committee (GOSC) reviews the results of the FSC II and submits recommendations to the VCSA Force Program Review.
- VCSA Force Program Review (FPR) reviews recommendations of GOSC and makes final recommendations for CSA decisions.
- CSA Decisions.- The CSA approves and lays down the Army program force (TAA BASE FORCE).

Page 3 of 3 To EXIT - SPACE bar To READ - PgUp
/end

HYPER FIA

FORCE INTEGRATION ANALYSIS - ACTIVITY

Force Integration Analysis (FIA) determines the executability of all aspects of the BASE FORCE as refined and recommended for approval during the preceding quantitative analysis. The FIA addresses equipment, manpower, facilities, training, and sustainment issues. This analysis is conducted in preparation for POM Development.

The force integration analysis determines the executability of all aspects of the TAA process derived BASE FORCE, namely its manning, training, sustainment and facilities. It is a continuation of the qualitative phase of TAA in support of the POM development and refinement. The Strategy and Planning Committee (SPC), chaired by the ADCSOPS, has oversight of the FIA process.

The final output of the FIA is an executable POM force to be briefed, for decision, to the SA/CSA.

Page 1 of 1 To CONTINUE - SPACE bar

/end

HYPER POM

POM DEVELOPMENT

Army programming translates OSD and Army planning and programming guidance into a comprehensive and detailed allocation of forces, manpower, and dollars for a five year period in the Program Objective Memorandum (POM).

These documents present the Army's proposal for a balanced allocation of its resources within the specified constraints. The force so constituted, the M-Force, is said to be 'locked' for POM submission.

The Director, Program Analysis and Evaluation (DPAE), Office of the Chief of Staff, Army (OCSA), has Army Staff responsibility for the programming phase of the PPBES. The Assistant Secretary of the Army for Financial Management (ASA(FM)) monitors the POM development within the Army Secretariat.

Page 1 of 2 To EXIT - SPACE bar To READ - PgDn #p

POM DEVELOPMENT (Cont'd)

The product of the TAA and POM processes is the approved force structure for the Total Army which is divided into components (COMPO): COMPO 1 - Active Army, COMPO 2 - National Guard, COMPO 3 - Army Reserve and COMPO 4 - unresourced units.

The COMPO 4 units, mostly Combat Service Support (CSS) units, are part of the Army's required force structure, but are unresourced so that available resources can be applied to higher priority forces.

The COMPO 7, 8, and 9 are force structure 'offsets'. They correspond to assets available through Host Nation Support Agreements, CINCs' estimates for support using indigenous labor, and contracts for support to be provided by domestic and foreign firms. These assets 'offset' requirements for force structure for support tasks.

Page 2 of 2 To EXIT - SPACE bar To READ - PgUp

/end

HYPER FSC I-TAA2

FORCE STRUCTURE CONFERENCE I - ACTIVITY

Force Structure Conference I activities consists of the update and quality control of the force development data base, workload planning factors, and allocation rules, in preparation for the subsequent Support Requirements Analysis (SRA).

FSC I in TAA Sequence II is very similar to FSC I in TAA Sequence I except that the guidance preparation is used to update and refine the baseline results of the prior two years. There is no baseline run in the subsequent quantitative analysis. This analysis consists of comparing the refined baseline with the results of well-defined excursions from the baseline run prescribed by ODCSOPS (currently Rapid Reinforcement Planning and PACOM).

Page 1 of 2 To EXIT - SPACE bar To READ - PgDn #p

FORCE STRUCTURE CONFERENCE I - MILESTONES

- Force Structure Conference II - Reviews and recommends approval of allocation rules and workload factors.
- Council of Colonels I - Review and validate recommendations.
- General Officer Steering Committee - Review and approve adjustments to the Base Case for quantitative analysis.

Page 2 of 2 To EXIT - SPACE bar To READ - PgUp

/end

HYPER QA-TAA2

QUANTITATIVE ANALYSIS ACTIVITY

The analysis consists of force deployment and warfighting simulations and analyses to determine force structure requirements.

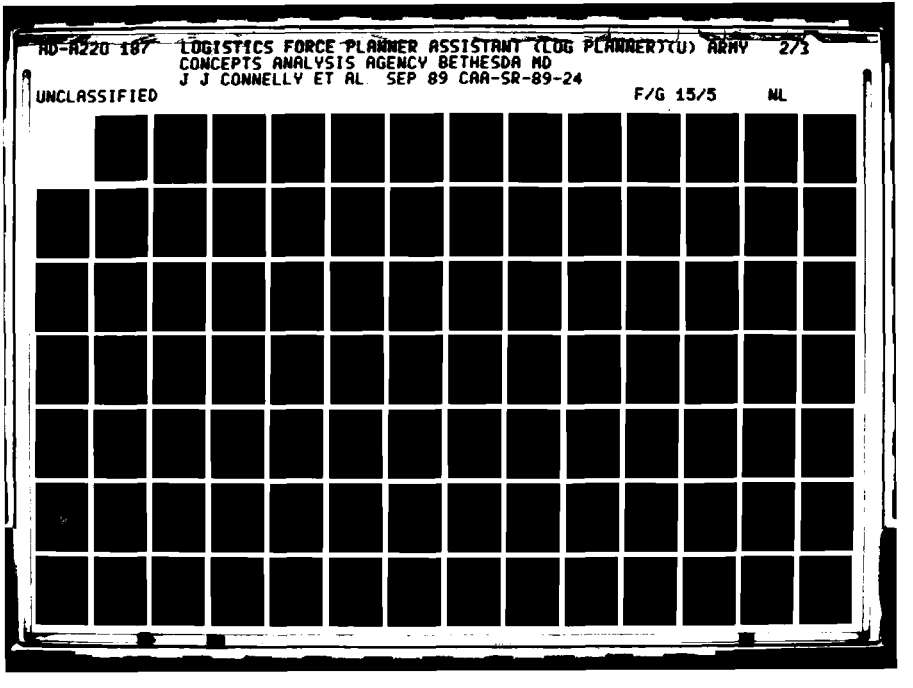
Using the input provided in the force guidance and the results of FSC I, the Concepts Analysis Agency employs #mcomputer models#m to conduct the Support Requirements Analysis (SRA).

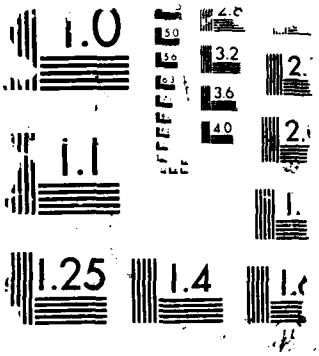
The analysis compares the baseline force against two other well defined iterations prescribed by ODCSOPS. Disconnects are evaluated and the need for adjustments to the baseline support forces are assessed.

The output is the TAA DESIGN FORCE which is used as input to the ensuing qualitative analysis to establish the TAA BASE FORCE.

Page 1 of 1 To CONTINUE - SPACE bar

/end


AD-A220 187 LOGISTICS FORCE PLANNER ASSISTANT (LOG PLANNER)(U) ARMY 2/3
CONCEPTS ANALYSIS AGENCY BETHESDA MD
J J CONNELLY ET AL. SEP 89 CAA-SR-89-24
UNCLASSIFIED F/G 15/5 NL


1.0
1.1
1.25
1.4
3.2
3.6
4.0
2.
2.
1.

HYPER regulation

TOTAL ARMY ANALYSIS (TAA)

Force structure development; the derivation of the Army Program Force Structure through an analysis of the National Military Strategy, Potential Threats, Doctrine, and available or projected resources.

AR 71-11, Total Army Analysis

Page 1 of 1 To CONTINUE - SPACE bar

/end

HYPER PPBES

THE ARMY PPBES

The Planning, Programing, Budgeting, and Execution System (PPBES) is the Army's primary strategic management system to allocate and manage resources. Its objectives are :

- o Reflect the national military strategy in sizing, structuring, and manning the Army force.
- o Obtain required forces, manpower, materiel and dollars.
- o Allocate forces, manpower, materiel, and dollars among competing demands according to Army resource allocation policy and priorities.
- o Evaluate how well execution of the program and budget achieves intended purposes and make adjustments accordingly.

Page 1 of 2 To EXIT - Space Bar To READ - PgDn #p

PPBES and TAA

Total Army Analysis (TAA) is an integral part of the Planning phase of the Army's Planning, Programing, Budgeting, and Execution System (PPBES). It is used to develop for each POM year, a proposed program force that best meets projected mission requirements within anticipated resource levels (the BASE FORCE).

Its associated Force Integration Analysis (FIA) is used to verify that the force is both affordable and supportable.

TAA extends well into POM development where it overlaps or merges with the Programing phase of the PPBES system.

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HYPER TAP

THE ARMY PLAN

The Army Plan (TAP) is the final product of the PPBES Planning phase. It is prepared by ODCSOPS in coordination with HQDA staff agencies and the MACOMs. It is published as Army Guidance (AG), Vol. I, each odd calendar year in November. TAP guides Army program development. It documents force levels stabilized initially through force requirements planning and then refined through objectives planning as featured in the Total Army Analysis and its associated Force Integration Analysis.

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HYPER M-Force

THE M-FORCE

Troop accounting and documentation guidance is prepared by HQDA and provided to the MACOMs, U.S. Army Reserve (USAR), and the Army National Guard (ARNG) to permit development of authorization documents and to account for personnel allocations at all levels in the chain of command.

This guidance is developed biennially when the M-Force is 'locked' for POM submission, or with the results of the FIA during the 'off' years, and it directs that specific force structure actions be carried out within allocated manpower resources. Troop lists for the current and budget years and for each of the program years are provided from the M-Force maintained in the Army's #mForce Accounting System#m (FAS).

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HYPER Force Accounting System

FORCE ACCOUNTING SYSTEM (FAS)

The FAS is the Army's authoritative record of force structure decisions and provides users with force structure planning information. Strength data are provided by military personnel type (officer, warrant, enlisted) and civilian category (direct and indirect hire).

FAS does not contain force structure data at the MOS and grade level detail. The FAS supports development of command plans by the MACOMs, the Troop Action Guidance (TAG) by the USAR, and the Troop Structure Program (TSP) by the ARNG.

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HYPER computer models

COMPUTER MODELS

The simulation models used by CAA for the Support Requirements Analysis are COSAGE, TRANSMO, CEM and FASTALS. During TAA Sequence I, the models are used to establish a baseline DESIGN FORCE. During TAA Sequence II, excursions from the baseline are run to establish their effect on the DESIGN FORCE.

The use of the models is described on the next page.

Page 1 of 3 To EXIT - Space Bar To READ - PgDn #p

MODEL *	USE
COSAGE	Develop the combat attrition data for division-size engagements
TRANSMO	Provide data on the deployment of U.S. forces to theaters
CEM	Conduct theater warfights with forces (including TRANSMO deployed U.S. forces) using the COSAGE combat attrition data
FASTALS	Round out the U.S. combat force with support forces

* For model interactions and descriptions see next page

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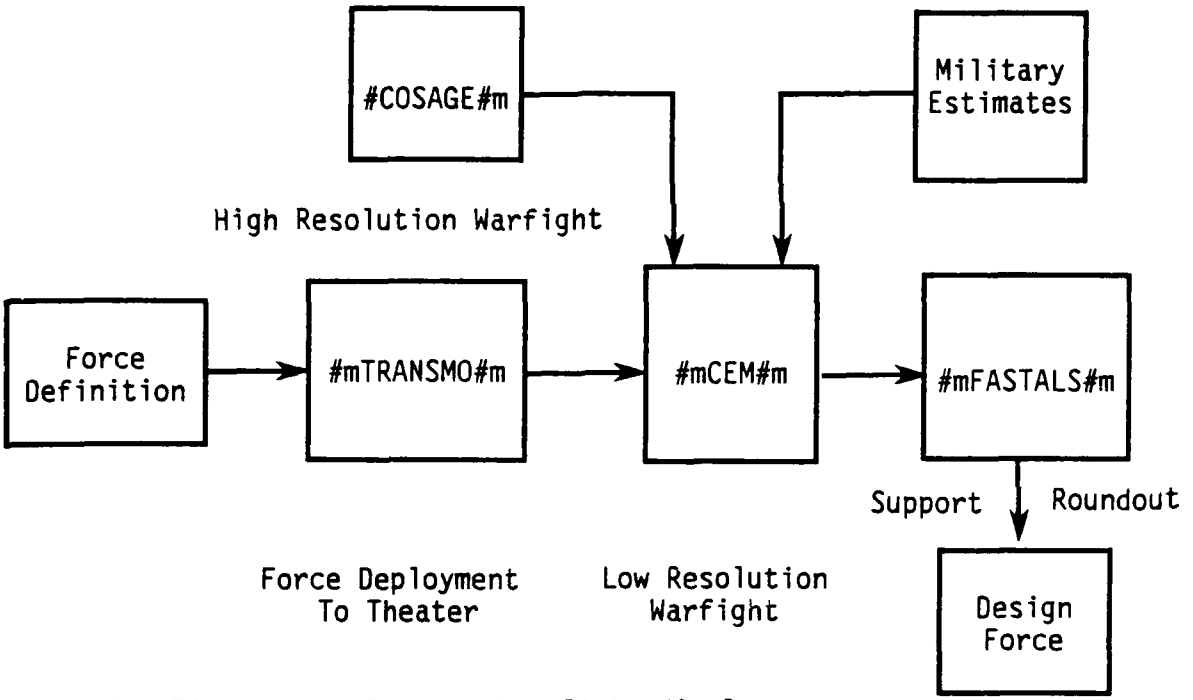

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COMBAT SAMPLE GENERATOR (COSAGE)

COSAGE simulates various division tactical operations which serve as input to the Concepts Evaluation Model (CEM). It is a symmetrical, high-resolution, two-sided, stochastic combat simulation. The model simulates a 24-hour period of combat and produces expenditures of ammunition, losses of personnel, and losses of major end items.

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HYPER TRANSMO

TRANSPORTATION MODEL (TRANSMO)

TRANSMO estimates a realistic deployment schedule of a specific movement requirements list (MRL). It is a deterministic simulation model that provides a quick response analytical tool for the measurement and assessment of the U.S. mobility force's strategic deployment capability. The model is designed to move cargo identified in terms of tonnage by cargo type rather than unit type.

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HYPER CEM

CONCEPTS EVALUATION MODEL (CEM)

CEM determines theater force combat capabilities and requirements. It is a two-sided, deterministic model involving theater land and air forces. Command decision processes are simulated at intervals of 12 hours up to 4 days. Theater supply, weapons systems replacement, maintenance, repair, and hospital functions are also simulated.

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HYPER FASTALS

FORCE ANALYSIS SIMULATION OF THEATER
ADMINISTRATIVE AND LOGISTICS SUPPORT
(FASTALS)

FASTALS computes administrative and logistical workloads along with existence rules to generate unit requirements for the theater level support force structure necessary to round out a combat force in a given confrontation.

It is a one-sided, requirements-oriented model that may be used in any support force planning simulation to develop a force that is balanced, time-phased, and geographically distributed. The model may be used to assess the effects of different constraints and supply policies in accomplishing logistic functions.

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PART 3. ISSUE COORDINATION MANAGEMENT

HYPER Introduction

INTRODUCTION TO ISSUE COORDINATION MANAGEMENT

The LOG PLANNER description of the management and evaluation of logistics issues during the TAA process is organized into three topics as follows.

- o TAA PARTICIPANTS - The participants in the management and evaluation of the logistic issue generated by the TAA process come from the Army Staff (ARSTAF), and the major commands (MACOMS), and the integrating centers and schools. Interaction with the logistics schools, for logistics matters, is through the Logistics Center (Log Center) at Ft Lee, VA. The Logistics Center is responsible for ensuring current doctrine is integrated in our force structure.

- o TAA ACTIVITIES - DALO-PLF is involved in each of the major activities of the TAA process as they progress over the first two-year cycle of the quadrennial TAA process and are then repeated in the second two-year cycle.

(cont'd)

Page 1 of 3 To EXIT - SPACE bar To READ - PgDn #p

- o POINTS OF CONTACT

The Army has developed and implemented the Organizational Integration (OI) concept to field integrated combat, service and combat service support organizations. DALO-PL has overall responsibility within ODCSLOG for managing the implementation of the OI concept.

The vehicle within ODSCLOG for implementing the OI concept is the Logistical Organizational Integration Committee (LOIC). Each director within ODCSLOG appoints a point of contact (POC) for coordination within the directorate and provides Logistical Organizational Integrators (LOIs) for functional specialties.

DALO-PLF chairs and coordinates the actions of the Logistical Organizational Integrators Committee (LOIC).

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Page 2 of 3 To EXIT - SPACE bar To READ - PgUp/PgDn #p

o POINTS OF CONTACT (cont'd)

The LOIC work directly with their counterpart Organizational Integrators from ODSCOPS. DALO-PLF monitors this activity to ensure continuity of logistics force structure actions.

LOIC members actively participate in the force structure/ integration decision processes, including the Army Force Planning Data and Assumptions (AFPDA), Total Army Analysis (TAA) and the Program Objective Memorandum (POM).

DALO-PLF coordinates the force structure data to the LOIC members for support of functional analysis and recommendations.

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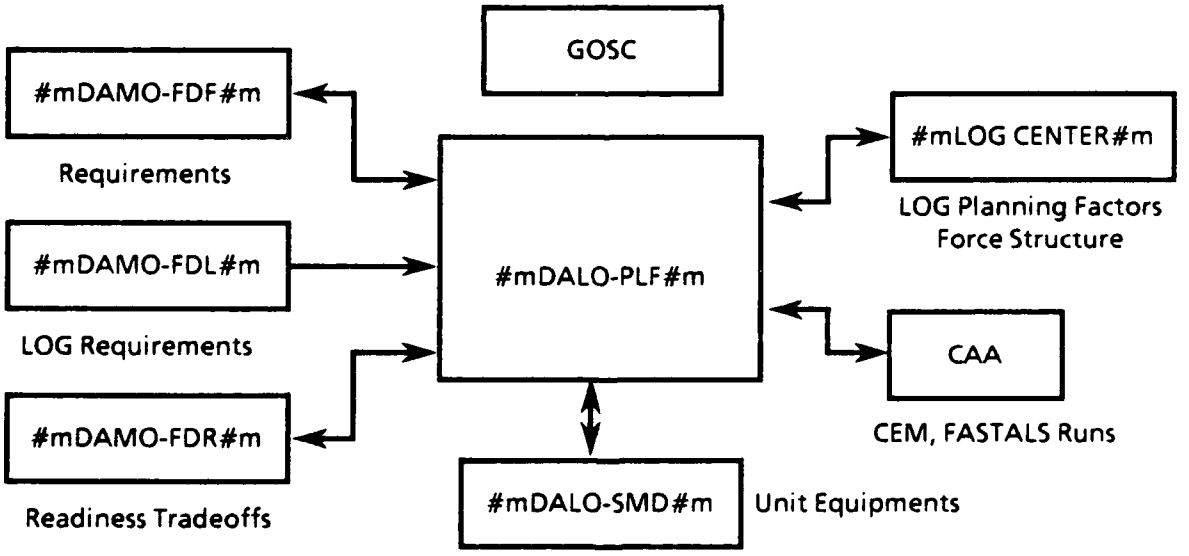
HYPER TAA Participants



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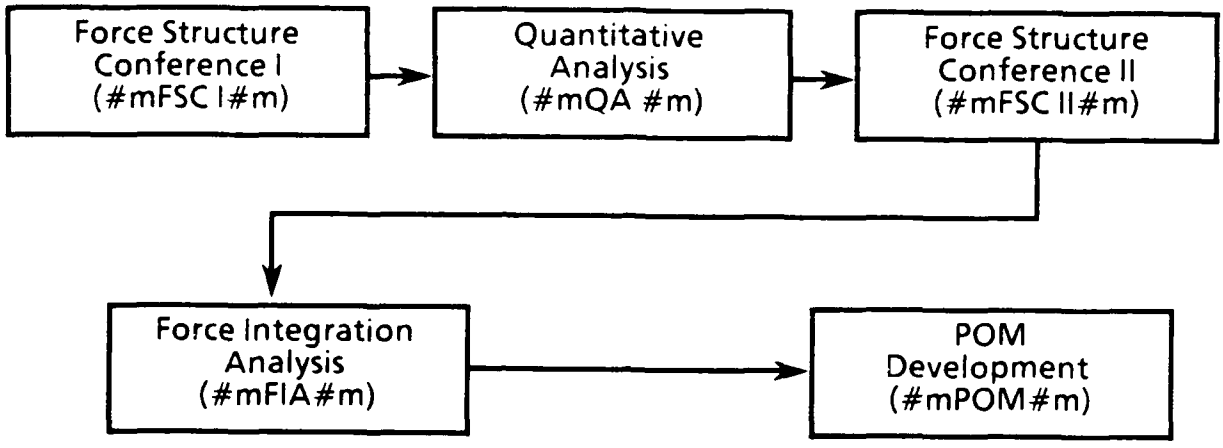
HYPER TAA Activities

TAA SEQUENCE - ACTIVITY FLOW



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HYPER TAA Points of Contact

POINTS OF CONTACT

ARSTAF Element	POC List
ODCSOPS	#mMajor Force Integrators#m #mOrganizational Integrators#m #mCommand Managers (TDA Units)#m
ODCSLOG	#mLog Organizational Integrators (Interface)#m #mLog Organizational Integrators (Functional)#m

Press F3 key (at left) to select list - then press F4 key.

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HYPER DALO-PLF

DALO-PLF RESPONSIBILITIES

- o Participate with ODCSOPS and CAA as the ODCSLOG lead in the TAA process.
- o Participate in the review and approval of logistics unit force allocation rules for use in TAA simulations.
- o Responsible for the development of the logistics section of the Army Force Planning Data and Assumptions (AFPDA).
- o Exercise DA staff responsibility for logistics planning factors.

Page 1 of 2 To EXIT - SPACE bar To READ - PgUp #p

DALO-PLF RESPONSIBILITIES (Cont'd)

- o Recommend to DAMO-FDL/FDF, in coordination with DALO-TS, DALO-SM and DALO-AV, the optimum quantity and mix of logistics units required to support the POM force.
- o Develop the coordinated ODCSLOG position on logistics unit activations, inactivations, and conversions.
- o Coordinate logistics force improvement actions for the program force to include function/doctrine changes, and analysis of productivity enhancement programs.

Page 2 of 2 To EXIT - SPACE bar To READ - PgUp

/end

HYPER LOG CENTER

LOG CENTER RESPONSIBILITIES

- Develops planning factors for the force structure process in TAA as it relates to combat service support (CSS) units.
- Assists in the determination of programming changes required by changes in Host Nation Support capabilities and logistics civil augmentation capabilities.
- Assists with equipment issues, as they relate to TOE capabilities and LUPS equipment modernization in CSS units.
- Approves allocation rules for combat service support units which have been developed by the combat service support schools. These rules are reviewed and formally approved in FSC I.

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HYPER DALO-SMD

DALO-SMD RESPONSIBILITIES

- Maintains and supervises operation of the Total Army Equipment Equipment Distribution Program (TAEDP). The TAEDP is executed several times a year to generate an Army-wide distribution of equipment over the current, budget and POM years.
- Conducts data extracts of the TAEDP data base to support DALO-PL action officer requests. The TAEDP data base is accessed through the Equipment Distribution Module of the LOG Decision Support System (LOG DSS) with access terminals in the DALO-SMD area.
- Provides unit equipment status information in the TAA and FIA to ensure units are not activated/converted which cannot be supportable.

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HYPER DAMO-FDF

DAMO-FDF RESPONSIBILITIES

DAMO-FDF maintains the Force Accounting System (FAS) which holds the approved requirements and authorizations for the Army force structure.

The FAS is maintained by DAMO-FDF and is supported by other FD personnel designated as Organizational Integrators (OIs) and Force Integrators (FIs). The OIs handle units Bn-size and below. The FIs handle units above Bn-size. They interact with their counterpart Logistical Organizational Integrators (LOIs).

The OIs work with the units in the force by Standard Requirement Code (SRC). They are responsible for all aspects of the force structure changes to the SRC, to include training, facilities, personnel and equipment considerations.

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HYPER DAMO-FDR

DAMO-FDR RESPONSIBILITIES

- Supports DALO-PLF with prioritization of individual support equipments (LIN) within individual units (UIC), as it relates to the fielding of the units.
- Provides prioritization guidance on allocation of funding to support equipments.

Page 1 of 1 To CONTINUE - SPACE bar

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HYPER DAMO-FDL

DAMO-FDL RESPONSIBILITIES

- Conducts organizational integration of support forces within ODCSOPS and interacts with corresponding logistics integration personnel within ODCSLOG.

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HYPER FSC I

FORCE STRUCTURE CONFERENCE I ACTIVITY

The Force Structure Conference I activity provides for update and quality control of the force development data base, workload planning factors and allocation rules in preparation for computer runs in the following quantitative analysis.

Page 1 of 2 To EXIT - SPACE bar To READ - PgDn #p

FORCE STRUCTURE CONFERENCE I MILESTONES

During this phase, DALO-PLF:

(1) Receives message from ODCSOPS announcing a Force Structure Conference (FSC I).

(2) Receives a master file (which includes allocation rules) from CAA.

(3) Chairs LOIC meeting to distribute master file to LOI's, provide guidance, and request the functional position.

(4) Receives functional positions on rules.

(5) Consolidates positions. Briefs DALO-PLZ to obtain guidance. (cont'd)

Page 2 of 3 To EXIT - SPACE bar To READ - PgUp/PgDn #p

(6) Briefs the ODCSLOG senior management and the DCSLOG and obtains official DCSLOG position.

(7) Attends the Force Structure Conference with other LOIs.

(8) Briefs PLZ on issues prior to Council of Colonels.

(9) Briefs the DCSLOG on issues and obtains the DCSLOG position.

(10) Prepares PLZ to chair Council of Colonels.

(11) Prepares Div. Chief, PLF to participate in Council of Colonels.

(12) Prepares ADCSLOG to participate in General Officer Steering Cmte.

Page 3 of 3 To EXIT - SPACE bar To READ - PgUp

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HYPER QA

QUANTITATIVE ANALYSIS ACTIVITY

The ARSTAF, including DALO-PLF, has no active role during the Quantitative Analysis phase of the TAA.

The Quantitative Analysis is a computer intensive activity conducted by CAA, based upon the inputs and guidance generated by Force Structure Conference I activity.

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HYPER FSC II

FORCE STRUCTURE CONFERENCE II ACTIVITY

Force Structure Conference II provides for the incorporation of qualitative considerations into the force structure development.

Functional areas are grouped into #mTDA Panels#m and TOE Panels, each chaired by an ARSTAF O-6. The panels meet during the first three days of the conference. DALO-PLF, as a panel member, participates in the panel review of the staffed MACOM proposals. Each panel votes on each of its proposals and assigns each issue into one of three #missue categories#m. Issues are either resolved during the panel meeting or forwarded to the Council of Colonels as an issue.

The TDA and TOE issues are presented to the Council of Colonels, as part of the final two days of FSC.

Page 1 of 3 To EXIT - SPACE bar To READ - PgDn #p

FORCE STRUCTURE CONFERENCE II MILESTONES

During this phase, DALO-PLF:

(1) DALO-PLF Receives message from ODCSOPS announcing FSC II.

(2) LOIC meets. DALO-PLF provides attendees an agenda of FSC II and reiterates the responsibilities of LOIC members.

(3) LOIC briefs the ODCSLOG and Directors/Office chiefs. To prepare for this meeting, Directors/Office chiefs:

- o Review the printouts of their assigned areas for force requirements and develop ODCSLOG position.
- o Review issues received from ODCSOPS and develop ODCSLOG position of Support/Non-Support. (Cont'd)

Page 2 of 3 To EXIT - SPACE bar To READ - PgUp/PgDn #p

(4) Obtains Director/Office Chief 'chops' on position.

(5) Presents the LOIC brief, item (3), to the DCSLOG.

(6) Provides information briefs to ODCSOPS senior management.

(7) Attends FSC II with other LOIs.

(8) Briefs PLZ on issues prior to Council of Colonels (COC).

(9) Prepares: PLZ to chair COC, Chf PLF to participate in COC.

(10) Prepares ADCSLOG for General Officer Steering Committee (GOSC).

(11) Prepares the DCSLOG to attend the Force Program Review (FPR), chaired by the VCSA.

Page 3 of 3 To EXIT - SPACE bar To READ - PgUp

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HYPER TDA Panels

TDA PANELS (TAA 96)

(1) Information Management Systems,
Fiscal & Resource Management.
(2) Command & Support; Operations, Plans, Forces;
Training and Education.
(3) Engineering, Logistics,
Installation Facilities Engineerimg.
(4) Health Services.
(5) Intelligence, Security.
(6) Administration, Manpower, Personnel,
Civilian Training.
(7) R & D, Material & Acquisition, Acquisition.

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HYPER issue categories

TDA ISSUE CATEGORIES

- Recommended for Resourcing.
(Briefed to Council of Colonels)
- Not Recommended for Resourcing.
- Not Recommended for Resourcing, but
Carried Forward for Visibility.
(Optionally briefed to Council of Colonels)

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HYPER FIA

FORCE INTEGRATION ANALYSIS ACTIVITIES

Significant problems during Force Integration Analysis (FIA) arise from common use items in units. Kits, trucks and other such items are not systematically accounted for in the force programming and may result in readiness shortfalls.

FIA programming priority generally goes to correcting these shortfalls in existing units, before programming for new units.

During FIA, the OI's and LOI's are supported by DALO-SMD which provides force equipment distribution data and unit readiness data from the TAEDP data base, from which the shortfall issues are identified.

DALO-PLF functions to collect the issues information from the LOIs and briefs the ODCSLOG senior management.

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HYPER POM

DALO-PLF: TAA POM DEVELOPMENT

Part of the responsibilities of DALO-PLF is to recommend to DAMO-FD; in coordination with DALO-TS, DALO-SM, and DALO-AV; the optimun quantity and mix of logistics units required to support the POM force.

For this purpose, DALO-PLF has traditionally held membership in the Force Structure Panel, one of nine panels that prioritizes the MDEPs during the programming phase of the Army PPBES.

ODCSLOG also has membership in the Sustaining and Equipping Panels. However, the MDEP panel concept is now being phased out, and the PLF role has not been redefined.

Page 1 of 1 To CONTINUE - SPACE bar

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PART 4. ISSUE COORDINATION MANAGEMENT
(points of contact)

HYPER Major Force Integrators

AS OF: 26 Jan 89

MANAGER	AREA	PHONE	ROOM	OFFICE
LTC Price	SEP RC BDES/ACR, AC BDE (FC)	79782	2B534	DAMO-FDF
LTC Wilson	CORPS	43172	2B534	DAMO-FDF
MAJ Sorensen	SPECIAL OPERATIONS FORCES	70113	2B534	DAMO-FDF
MAJ Kennan	HVY DIV (USAREUR)+ARNG HVY DIV	74582	2B534	DAMO-FDF
MAJ Rodriguez	HVY DIV(FC)/ROUNDOUT/NG INF DIV	74788	2B534	DAMO-FDF
MAJ Rodriguez	MTZ DIV	74788	2B534	DAMO-FDF
MAJ Walus	AIR ASSAULT/ABN DIVISIONS	43600	2B534	DAMO-FDF
MAJ Walus	2ID/LIGHT INF DIV	43600	2B534	DAMO-FDF
MAJ Taylor	EAC (NATO)	79782	2B534	DAMO-FDF
Mr. Harper	EAC (SWA/NEA)	73570	2B534	DAMO-FDF

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HYPER Organizational Integrators

AS OF: 26 Jan 1989

SRC	TITLE	OI MANAGER	OFFICE	ROOM	PHONE
01	Aviation (Avn)	MAJ Flynn	DAMO-FDV	1A873	79667
03	Chemical (CM)	MAJ Spencer	DAMO-FDL	2C531	53637
05	Engineers	LTC Taylor	DAMO-FDD	2C529	75613
06	Field Arty (FA)	LTC Patrie	DAMO-FDG	2D542	56671
06	Field Arty (FA)	Mrs. Whitman	DAMO-FDG	2D542	53676
07	Infantry (IN)	LTC Moss	DAMO-FDD	3C529	42332
08	Medical (MED)	LTC Stahl	DAMO-FDL	2C531	78699
09	Ord & Msl Mnt	LTC Roberts	DAMO-FDQ	2C549	40552
10	Quartermaster	MAJ Scipione	DAMO-FDL	2C531	75770
11	Signal Corps (SC)	MAJ Carter	DAMO-FDC	2E537	32263
11	SC (IMA/DPU/MCOM	MAJ Anderson	DAMO-FDC	2E537	32262
12	Adj General (AG)	LTC Snead	DAMO-FDL	2C531	52829

Page 1 of 4 To EXIT - SPACE bar To READ - PgDn #p

AS OF: 26 Jan 1989

SRC	TITLE	OI MANAGER	OFFICE	ROOM	PHONE
14	Finance (FI)	LTC Roche	DAMO-FDL	2C531	34836
16	Chaplain	LTC Roche	DAMO-FDL	2C531	34836
17	Armor (AR)	MAJ Nezezon	DAMO-FDD	3C529	70806
19	Mil Police (MP)	MAJ Burnett	DAMO-FDL	2C531	70421
20	Mil History	LTC Snead	DAMO-FDL	2C531	52829
27	JAG	LTC Roche	DAMO-FDL	2C531	34836
29	Composite Svc (CS)	LTC Brown	DAMO-FDL	2C531	46694
29	Composite Svc (HQ)	LTC Siegert	DAMO-FDL	2C531	54063
29	CS RAOC	LTC Wilson	DAMO-FDF	2B534	43172
30	Mil Intelligence	Ms. Bockman	DAMO-FDI	2C536	54306
31	Spec Forces (SF)	MAJ Sorensen	DAMO-FDF	2C549	70113
32	Security (AS)	Ms. Bockman	DAMO-FDI	2C536	54306

Page 2 of 4 To EXIT - SPACE bar To READ - PgUp/PgDn #p

AS OF: 26 Jan 1989

SRC	TITLE	OI MANAGER	OFFICE	ROOM	PHONE
33	Psych. Ops. (PO)	MAJ Sorensen	DAMO-FDF	2C549	70113
34	CEWI Mil Intel (MI)	LTC Davidson	DAMO-FDF	2C536	54306
39	Spec Weapons (ML)	LTC Patrie	DAMO-FDG	2D542	56671
41	Civil Affairs (CA)	MAJ Sorensen	DAMO-FDF	2C549	70113
42	Quartermaster (QM)	MAJ Scipione	DAMO-FDL	2C531	75770
43	Maintenance (OD)	LTC Brown	DAMO-FDQ	2C531	54231
44	Air Defense (AD)	Mr. Paine	DAMO-FDE	2D547	79531
45	Public Affairs	LTC Snead	DAMO-FDL	2C531	52829
51	Army HQ, BCE/RTOC	LTC Wilson	DAMO-FDF	2B534	43172
52	Corps HQ, RAOC/RTOC	LTC Wilson	DAMO-FDF	2B534	43172
54	Logistics (LC)	MAJ Siegert	DAMO-FDL	3D515	54063

Page 3 of 4 To EXIT - SPACE bar To READ - PgUp/PgDn #p

AS OF: 26 Jan 1989

SRC	TITLE	OI MANAGER	OFFICE	ROOM	PHONE
55	Transportation (TC)	MAJ Quick	DAMO-FDL	2C531	40556
57	IN (Airborne)	LTC Moss	DAMO-FDD	3C529	42332
63	CS Cmbt Svc Sup (HQ)	MAJ Siegert	DAMO-FDL	3D515	54063
67	IN Air Assault	LTC Moss	DAMO-FDD	3C529	42332
77	IN Light Inf HHC	LTC Moss	DAMO-FDD	3C529	42332
87	AR Hvy Div (AR)	MAJ Nezezon	DAMO-FDD	3C529	70806
xx	AR Hvy Div (IN)	MAJ Nezezon	DAMO-FDD	3C529	70806
87	AR RTOC	LTC Wilson	DAMO-FDF	2B534	43172
95	Aviation	MAJ Flynn	DAMO-FDV	1A873	79667
97	Div Trng	LTC Comer	DAMO-FDF	2B514	33727

Page 4 of 4 To EXIT - SPACE bar To READ - PgUp #p
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HYPER Command Managers (TDA Units)

AS OF: 26 Jan 1989

ASGMT CODE	COMMAND	CMD MANAGER	OFFICE	ROOM	PHONE
Team Chief		LTC Sale	DAMO-FDF	2B534	56575
AC	USAFAC	Ms. Batchelor	DAMO-FDF	2B534	56955
AG	TAG	Ms. Batchelor	DAMO-FDF	2B534	56955
AS	INSCOM	Mr. Jenkins	DAMO-FDF	2B534	74274
AU	AAA	Ms. Batchelor	DAMO-FDF	2B534	56955
CB	CIDC	Mr. Jenkins	DAMO-FDF	2B534	74274
CE	COE	LTC Hamilton	DAMO-FDF	2B534	56577
CS	OCSA	Ms. Batchelor	DAMO-FDF	2B534	56955
CZ	INFO SYS	Mr. Roddy	DAMO-FDF	2B534	33834
DF	DEFENSE	Ms. Brenner	DAMO-FDF	2B534	72709
E	USAREUR	Ms. Brodrick	DAMO-FDF	2B534	56954
FC	FORSCOM	MAJ Buchanan	DAMO-FDF	2B534	75987

Page 1 of 3 To EXIT - SPACE bar To READ - PgDn #p

AS OF: 26 Jan 1989

ASGMT CODE	COMMAND	CMD MANAGER	OFFICE	ROOM	PHONE
GB	NGB	Ms. Batchelor	DAMO-FDF	2B534	56955
HS	HSC	Mr. Jenkins	DAMO-FDF	2B534	74274
JA	JOINT	LTC Sale	DAMO-FDF	2B534	56575
JI	JOINT	LTC Sale	DAMO-FDF	2B534	56575
MA	USMA	Ms. Batchelor	DAMO-FDF	2B534	56955
MD	TSG	Ms. Batchelor	DAMO-FDF	2B534	56955
MP	TAPA	Ms. Batchelor	DAMO-FDF	2B534	56955
MT	MTMC	Mr. Jenkins	DAMO-FDF	2B534	74274
MW	MDW	Mr. Jenkins	DAMO-FDF	2B534	74274
PC	MEPCOM	Mr. Roddy	DAMO-FDF	2B534	33834
P1	WESTCOM	MAJ Hannah	DAMO-FDF	2B534	49210
P3	USARJ	MAJ Hannah	DAMO-FDF	2B534	49210

Page 2 of 3 To EXIT - SPACE bar To READ - PgUp/PgDn #p

AS OF: 26 Jan 1989

ASGMT CODE	COMMAND	CMD MANAGER	OFFICE	ROOM	PHONE
P8	EUSA	MAJ Hannah	DAMO-FDF	2B534	49210
RC	USAREC	Mr. Roddy	DAMO-FDF	2B534	33834
SA	OSA	Ms. Batchelor	DAMO-FDF	2B534	56955
SC	SDC	Ms. Batchelor	DAMO-FDF	2B534	56955
SF	FOA's	Ms. Batchelor	DAMO-FDF	2B534	56955
SU	USARSO	MAJ Hannah	DAMO-FDF	2B534	49210
TC	TRADOC	Ms. Brenner	DAMO-FDF	2B534	72709
TS	TSA	Ms. Batchelor	DAMO-FDF	2B534	56955
X	AMC	LTC Hamilton	DAMO-FDF	2B534	56577

Page 3 of 3 To EXIT - SPACE bar To READ - PgUp

/end

HYPER Log Organizational Integrators (Interface)

AS OF: 21 Jan 1988

INTERFACE ACTIVITY	OFFICE	AGENT	ROOM	PHONE
Army Log Assessment	DALO-LEP	Mr. Smith		AV 977-6387
Host Nation Support	DALO-PLF	LTC Trautner	2C564	75189
Int. Log Support	DALO-SMS	MAJ Potts	1C564	40313
Operations Plans	DALO-PLO	LTC Petrison	2C556	72316
POM	DALO-RMP	MAJ Vincent	1E565	53453
POMCUS	DALO-SMW	LTC Mattox	1D557	55010
Reserves	DALO-PAR	COL Tillman	2C559	46676
National Guard	DALO-PNG	LTC Harrison	2C559	46680
TAEDP	DALO-SMD	Mr. Kern	2D575	75960
TDA	DALO-PLF	MAJ Teach	2C564	76666
Security Assistance	DALO-SAA	Ms. Greenspan	3D560	43762
BOIP	DALO-EARA	Mr. Hall		AV 345-3687
Phil. Army Depot		Mr Lewis		AV 355-3695

Page 1 of 1 To EXIT - SPACE bar

/end

HYPER Log Organizational Integrators (Functional)

AS OF: 21 Jan 1988

SRC	FUNCTION	OFFICE	AGENT	ROOM	PHONE
16	Chaplain	DALO-PLF	MAJ Copple	2C564	59164
27	Judge Advocate	DALO-PLF	LTC Trautner	2C564	75189
20	General (MH), PA	DALO-PLF	MAJ Copple	2C564	59164
45	General (MH), PA	DALO-PLF	MAJ Copple	2C564	59164
37	Mech Units	DALO SMT		1D567	47030
12	Adjutant General	DALO-PLF	MAJ Copple	2C564	59164
57	Airborne	DALO-PLF	LTC Revelle	2C564	53730
10	Airdrop	DALO-PLF	MAJ Teach	2C564	76666
67	Air Assault	DALO-PLF	LTC Revelle	2C564	53730
09	Ammunition	DALO-SMA	LTC Wallace	1D567	47032
39	Ammunition	DALO-SMA	LTC Wallace	1D567	47032
17	Armor (less Avn)	DALO-SMT	LTC Henderson	1D567	75977

Page 1 of 5 To EXIT - SPACE bar To READ - PgDn #p

AS OF: 21 Jan 1988

SRC	FUNCTION	OFFICE	AGENT	ROOM	PHONE
06	Artillery (less ADA)	DALO-SMT	Mr. Kozisek	1D567	74374
44	ADA	DALO-SMA	Mr. David	1D567	40538
xx	Autom. Data Proc.	DALO-PLI	Mr. Bloom	2C574	76204
01	Aviation Support	DALO-AV	LTC Johnson	1E572	70487
55	Aviation Support	DALO-AV	LTC Johnson	1E572	70487
95	Aviation Support	DALO-AV	LTC Johnson	1E572	70487
xx	Calibration	DALO-SMC	LTC Holtzer	1C560	78553
41	Civil Affairs	DALO-PLO	LTC Lamneck	2C556	74183
63	Cmbt Svc Spt				
87	Heavy Division	DALO-PLF	LTC Revelle	2C564	53730
97	Heavy Division	DALO-PLF	LTC Revelle	2C564	53730

AS OF: 21 Jan 1988

SRC	FUNCTION	OFFICE	AGENT	ROOM	PHONE
07	Light Inf. Div.	DALO-SMD	Mrs. Potts	2D575	74630
77	Light Inf. Div.	DALO-SMD	Mrs. Potts	2D575	74630
29	Composite Support	DALO-PLF	MAJ Teach	2C564	76666
98	Composite Support	DALO-PLF	MAJ Teach	2C564	76666
05	Engineers	DALO-PLF	MAJ Teach	2C564	76666
14	Finance	DALO-RMP	MAJ Vincent	1E565	53453
42	General Supply	DALO-SMP-S	LTC Hoose	1D573	57785
51	Headquarters	DALO-PLF	MAJ Teach	2C564	76666
52	Headquarters	DALO-PLF	MAJ Teach	2C564	76666
54	Headquarters	DALO-PLF	MAJ Teach	2C564	76666
63	Headquarters	DALO-PLF	MAJ Teach	2C564	76666
07	Inf (less Mech & Avn)	DALO-PLF	LTC Revelle	2C564	53730

AS OF: 21 Jan 1988

SRC	FUNCTION	OFFICE	AGENT	ROOM	PHONE
07	Infantry (Mech)	DALO-SMT	Mr. Crissup	1D567	75977
43	Maintenance	DALO-SMP-M	LTC Shadley	1D573	73324
08	Medical (less Avn)	DALO-PLF	MAJ Copple	2C564	59164
30	Mil Intel (less Avn)	DALO-PLF	Mr. Webb	1C560	53280
34	Mil Intel (less Avn)	DALO-PLF	Mr. Webb	1C560	53280
19	Military Police	DALO-PLF	LTC Ireland	2C564	55510
xx	Missile Support	DALO-SMA	Mr. Hill	1D567	40538
xx	Personnel	DALO-PLF	MAJ Copple	2C564	59164
xx	POL	DALO-TSE	MAJ Giandoni	1D577	73940
07	Ranger	DALO-PLO	LTC Lamneck	2C556	74183
xx	Rear Area Opns	DALO-PLF	LTC Revelle	2C564	53730
32	Security	DALO-PLF	LTC Ireland	2C564	55510

Page 4 of 5 To EXIT - SPACE bar To READ - PgUp

AS OF: 21 Jan 1988

SRC	FUNCTION	OFFICE	AGENT	ROOM	PHONE
xx	Services	DALO-TST	Mr. Weiting	1E583	47348
11	Signal	DALO-SMC	LTC Lopez	1C560	78553
31	Special Forces	DALO-PLO	LTC Lamneck	2C556	74183
33	Special Forces	DALO-PLO	LTC Lamneck	2C556	74183
55	Transportation	DALO-TSM	Mr. Freed	1C565	46610
10	Water	DALO-TSE-W	MAJ Murphy	1D600	43265
03	Chemical	DALO-SMA	LTC Junk	1D567	47032
xx	Subsistence	DALO-TST-A	Mr. Milks	1E583	51216
xx	Food Service	DALO-TST-F	LTC Poland	1E583	51202
xx	Clothing & Ind. Equip.	DALO-TST-E	Ms. Bryant	1E583	47344

Page 5 of 5 To EXIT - SPACE bar To READ - PgUp

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PART 5. ISSUE ANALYSIS METHODOLOGY

HYPER Introduction

INTRODUCTION TO ISSUE ANALYSIS METHODOLOGY

Among the types of analysis involved in the analysis of TAA issues there are two types which tend to recur at the staff level of logistics force planning.

One type is the COMPARISON of ALTERNATIVES. The task of this analysis is the identification, quantification and evaluation of the factors relevant to the conduct of trade-off among units which are competing for inclusion in the force under resource constraints.

The methodology described is based on the use of a SPREADSHEET technique which allows simultaneous consideration of the significant factors in the tradeoff and a clear identification of the basis for the trade-off decision.

Page 1 of 3 To EXIT - SPACE bar To READ - PgDn #p

ISSUE ANALYSIS METHODOLOGY (cont'd)

The other type of recurring analysis is the SUMMARY OF INFORMATION associated with the development of the force structure. The task of this analysis is to reduce the large volume of force related information into meaningful aggregations, for presentation to senior Army management.

One of the methodologies described uses a FREQUENCY DISTRIBUTION technique to provide pictorial (graphical) representation of the distribution of the quantities of force units and equipments.

A second methodology uses a CROSS TABULATION (CROSSTAB) technique to examine data from two different perspectives at once.

A third technique is construction of a DATA TABLE which classifies individual items of information in a convenient table format.

Page 2 of 3 To EXIT - SPACE bar To READ - PgUp/PgDn #p

ISSUE ANALYSIS METHODOLOGY (cont'd)

The methodology descriptions are divided into two parts. The first part describes the FUNDAMENTALS of the methodology. The second part provides an EXAMPLE of the application of the methodology.

The methodology descriptions are intended to acquaint logistics planners with the types of analysis which can be performed, and which they may actually encounter in the course of management and evaluation of specific TAA issues.

The information provided is intended to make logistics planners more critical consumers of analytic results, rather than developers of such information.

Page 3 of 3 To EXIT - SPACE bar To READ - PgUp
/end

HYPER Comparison of Alternatives

ISSUE ANALYSIS METHODOLOGY - COMPARISION OF ALTERNATIVES

METHODOLOGY	PART
Comparison of Alternatives	#mComparison Fundamentals#m #mComparison Example#m

To SELECT part - press F3, then F4

Page 1 of 1 To CONTINUE - SPACE bar
/end

HYPER Summary of Information

ISSUE ANALYSIS METHODOLOGY - SUMMARY OF INFORMATION

METHODOLOGY	PART
Summary of Information	#mSummary Fundamentals#m #mSummary Example#m

To SELECT part - press F3, then F4.

Page 1 of 1 To CONTINUE - SPACE bar
/end

HYPER Comparison Fundamentals

INTRODUCTION

In comparing alternatives, the basic procedure is to structure each of the candidates to meet a functional requirement, and then systematically compare them using a common set of evaluation factors.

The evaluation can be set up on a computer, using a program called a spreadsheet. A spreadsheet is a grid formed by columns and rows.

Each spreadsheet column holds the data for an alternative. The spreadsheet rows hold the individual factor values for the alternatives.

The following page illustrates a hypothetical situation comparing three alternative systems in terms of four evaluation factors.

Page 1 of 12 To EXIT - SPACE bar To READ - PgDn #p

SPREADSHEET ILLUSTRATION

Evaluation Factor	Alternative 1	Alternative 2	Alternative 3
Cost	100	50	75
Weight	1500	750	500
Cube	75	25	125
Color	Red	Green	Blue

This spreadsheet shows the Altermatives (1, 2, 3) being compared with respect to Cost, Weight, Cube and Color. Note that each alternative has values entered, in each cell, for each evaluation factor.

(Cont'd)

SPREADSHEET EVALUATION

There are 2 basic ways to evaluate the data in the spreadsheet namely:

- o By SUBJECTIVE EVALUATION
- o By OBJECTIVE EVALUATION

(Cont'd)

SUBJECTIVE EVALUATION

In the SUBJECTIVE EVALUATION, the data is simply inspected. The observer instinctively provides the selection criteria and selects the alternative with the most desirable characteristics.

This approach is useful only if:

(1) A single decision-maker is involved.

(2) There is no requirement to be explicit about the preferences among the selection criteria.

This approach is used primarily to insure a systematic comparision of all factors, for all alternatives, by a single individual. It would be useful as a preliminary screening tool where the data is to be subsequently reviewed by others. (Cont'd)

OBJECTIVE EVALUATION

In the OBJECTIVE EVALUATION, the preferences for the factors are made explicit. This is done by assigning a weight (numerical value) to each factor. The weight represents the factor's importance in the evaluation. The weights are selected so that the their sum is equal to 1, or some convenient multiple, say 10, as shown below.

SPREADSHEET WITH FACTOR WEIGHTS

Evaluation Factor	Factor Weight	Alternative 1	Alternative 2	Alternative 3
Cost	2	100	50	75
Weight	3	1500	750	500
Performance	4	75	25	125
Color	1	Red	Green	Blue
	(sum=10)			

RANKING OF ALTERNATIVES BY FACTOR

In the objective evaluation, the values of the factors, are replaced by the RANK of the factor values. The RANK is determined by placing the factors for each alternative in the preferred order. In the spreadsheet illustration, the factors are Cost, Weight, Performance Color. The preferred order for the factor values are:

Cost: lowest-to-highest
Weight: lowest-to-highest
Performance: highest-to-lowest.
Color: Red, Green, Blue

That is, low cost is preferred to high cost, low weight is preferred to high weight and high performance is preferred to low performance. Where the factor is not expresssed in numerical terms, as for the factor 'Color', the rank is assigned using a given preferred order, namely 'Red' (Rank 1), 'Green' (Rank 2), and 'Blue' (Rank 3). (Cont'd)

SPREADSHEET WITH WEIGHTED AND RANKED FACTORS

Evaluation Factor	Factor Weight	Alternative 1	Alternative 2	Alternative 3
		Rank Order	Rank Order	Rank Order
Cost	2	3	1	2
Weight	3	3	2	1
Performance	4	2	3	1
Color	1	1	2	3

This spreadsheet illustrates the replacement of the original factor values, by the rank of the factor values, following the preferred rank order described in the previous page. Note that each factor must be separately assessed to establish the appropriate rank order. The magnitude of the factor is not the indicator. (Cont'd)

FACTOR SIMPLIFICATION

With the use of the ranking criteria, two simplifications are achieved.

(1) The values for each factor are replaced by a simple numerical order, presenting a more interpretable display.

(2) More significantly, the values for each factor are now dimensionless numbers. As such, they can be combined (summed) into a single value, which was not possible when each factor had its own units (e.g. Cost in dollars, Weight in pounds).

(Cont'd)

COMBINING THE FACTOR WEIGHTS AND THE CELL RANKING

To establish the preferred alternative based on the assigned weights and ranks, carry out the following operations:

(1) Multiply the rank in each cell by its corresponding weight. This produces the weighted value for each factor.

(2) Sum the weighted ranks for each alternate to produce a 'score' for the alternative.

(3) The alternative with the lowest score is preferred, since the ranking process assigned the lowest numerical score (1) to the most preferred value. If, on the other hand, the most preferred value was assigned the highest rank, then the alternative with the highest score would be the preferred alternative.

(Cont'd)

SPREADSHEET WITH SUMMED WEIGHTED RANK VALUES

Evaluation Factor	Factor Weight	Alternative 1	Alternative 2	Alternative 3
Cost	2	2 x 3 = 6	2 x 1 = 2	2 x 2 = 4
Weight	3	3 x 3 = 9	3 x 2 = 6	3 x 1 = 3
Performance	4	4 x 2 = 8	4 x 3 = 12	4 x 1 = 4
Color	1	1 x 1 = 1	1 x 2 = 2	1 x 3 = 3
Total	10	24	22	14

Note that 'Alternative 3' has the lowest weighted sum (14) and is the preferred alternative for the particular factor weights and rank orders assigned.

ADJUSTMENT OF THE SPREADSHEET DESIGN

If the selection made is not considered satisfactory, either the weights have to be reassigned, or additional and/or different evaluation factors may have to be introduced to achieve a satisfactory result.

The process is objective in terms of the numerical values for factor weighting. It remains subjective in terms of the weights assigned. Changing the weights clearly changes the results. However, adjustment of the weights can reflect useful insights into the relative criticalness of the factors.

It is also important to take into acount the relative sizes of the scores. Scores which are relatively close in value may not provide a basis for selection.

SUMMARY

Generally, construction of the spreadsheet provides the opportunity to organize and review the important aspects of alternative selection.

It also provides the opportunity to clarify the selection factors and weights used, and may possibly lead to the identification of additional alternatives, which otherwise might not have been considered.

(End)

/end

HYPER Comparison Example

EXAMPLE OF COMPARISON OF ALTERNATIVES METHODOLOGY

This is a (simplified) example of the use of the comparison of alternatives methodology, applied to meeting a logistics support requirement in southwest Asia (SWA). The requirement is for transport of petroleum from coastal ports to forward deployed positions.

The analysis is to determine which of several modes of petroleum transport is preferred for the requirement.

ANALYSIS OF MODE OF TRANSPORT ALTERNATIVES

The following modes of transport are possible candidates considering the volume of petroleum to be transported and the local geography.

- o Road Haul (ROAD)
- o Rail Haul (RAIL)
- o Barge Haul (BARGE)
- o Pipeline (PIPE)

The following evaluation factors are to be considered along with their relative importance factor (weights):

- o Compatible Infrastructure (INFRASTRUCTURE) - Importance 2/10
- o New Construction Costs (CONSTRUCTION) - Importance 2/10
- o New Equipment Costs (EQUIPMNET) - Importance 2/10
- o Distribution Flexibility (FLEXIBILITY) - Importance 4/10

MODE OF TRANSPORT - BASIC DATA

FACTOR (Weight)	TRANSPORT MODE				
	ROAD	RAIL	BARGE	PIPE	(Best)
INFRASTRUCTURE (2)	Poor	None	Poor	None	Good (3)
CONSTRUCTION (2)	Med	High	Low	Low	Low (3)
EQUIPMENT (2)	Med	High	Med	Low	Low (3)
FLEXIBILITY (4)	Med	Low	Low	High	High (3)

This array contains the basic data associated with each candidate mode of transportation. Note that the factors, the factor weights and factor levels are simplified for purposes of presentation. Per the methodology, the factor level which is 'best', and its score is also indicated.

MODE OF TRANSPORT - RANKED DATA

FACTOR (Weight)	TRANSPORT MODE				
	ROAD	RAIL	BARGE	PIPE	(Best)
INFRASTRUCTURE (2)	2	1	2	1	Good (3)
CONSTRUCTION (2)	2	1	3	3	Low (3)
EQUIPMENT (2)	2	1	2	3	Low (3)
FLEXIBILITY (4)	2	1	1	3	High (3)

This array shows the factor levels for each candidiate replaced by their rank values. The rank is determined from the 'best' level for the factor and its associated rank as identified in the rightmost column.

Page 4 of 5 To EXIT - SPACE bar To READ - PgUp/PgDn #p

MODE OF TRANSPORT - WEIGHTED DATA

FACTOR (Weight)	TRANSPORT MODE			
	ROAD	RAIL	BARGE	PIPE
INFRASTRUCTURE (2)	2x2=4	2x1=2	2x2=4	2x1= 2
CONSTRUCTION (2)	2x2=4	2x1=2	2x3=6	2x3= 6
EQUIPMENT (2)	2x2=4	2x1=2	2x2=4	2x3= 6
FLEXIBILITY (4)	4x2=8	4x1=4	4x1=4	4x3=12
TOTALS 10	20	10	18	26

This array shows the ranked factor levels multiplied by the factor weights and then summed for each candidate. For the factors and the factor weights assigned, the highest score (26) is associated with the pipeline candidate. Therefore, PIPELINE is the preferred mode of petroleum transport for the region considered.

Page 5 of 5 To EXIT - SPACE bar To READ - PgUp
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HYPER Summary Fundamentals

INTRODUCTION

There is a variety of ways to present information, depending upon the nature of the information and the aspects of the information most useful to the user.

o FREQUENCY DISTRIBUTION - this technique replaces the data values of a set with their relative proportions (percent) of the total value of the set.

o CROSS TABULATION (CROSSTAB) - this technique extends the frequency distribution technique into a two-dimensional set of values, such that proportions are computed for both the horizontal and vertical data values in the set.

o DATA TABLE - this technique organizes the data in a table.

Each technique is described in the following pages.
(cont'd)

DATA PRESENTATION BY FREQUENCY DISTRIBUTION (PROPORTIONS)

In the FREQUENCY DISTRIBUTION approach, a particular charcteristic is chosen, and the data is summarized with respect to this characteristic. For example, use the characteristic Unit Type. The distribution for a data set with 200 units, 150 of which are MTOE units, and 50 of which are TDA units, is shown below.

Unit Type	Quantity
TOE	150 (75%)
TDA	50 (25%)
Total	200 (100%)

The concept can be readily extended to indicate the relative proportions (percent) of large numbers of components within a data set.

DATA PRESENTATION BY CROSS TABULATION

Unit Type	Combat Type		Totals
	Combat Arms Units	Combat Service Support Units	All Units
MTOE	50 (25%)	100 (50%)	150 (75%)
TDA	10 (5%)	40 (20%)	50 (25%)
Totals	60 (30%)	140 (70%)	200 (100%)

In this example, Combat Type has been introduced as an additional categorization factor. The 200 units can now been seen to consist of 60 Combat Arms units and 140 Combat Service Support units.

DATA PRESENTATION BY DATA TABLE

The data table provides a compact format for presenting information which is essentially text in character. There is no way to reduce it to a simplier form without losing its meaning. A table of equipment types and the nature of their maintenance problems is shown below to illustrate the technique.

LIN	Name	Maint Problem
A12345	Set,test	power supply failure
B12345	Set,generator	oil seal failure
C12345	Set,radio	antenna coupler failure

DATA SUMMARY CONTENT

The content of the data summary is controlled by the needs of the decision-maker(s) using the information. In TAA terms, two basic needs are: the content of the overall program, and critical or exceptional program situations, as shown below.

NEED	DATA SUMMARY ELEMENTS
Overall Program Information	Tallies of categories within program components and across components
Exceptional Information	Overages, shortfalls, incompatibilities within and across program conponents

Information summaries supporting these needs are illustrated in 'Example' associated with this discussion. (End)

Page 5 of 5 To EXIT - SPACE bar To READ - PgUp
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HYPER Summary Example

INTRODUCTION TO THE DATA SUMMARY EXAMPLE

A particularly important use of data summary occurs in the preparation of the document entitled the 'TOTAL ARMY ANALYSIS FORCE PROGRAM REVIEW' otherwise known as the "Horse Blanket."

The document gets its name from its large sheet size. The large size simply reflects the fact that a number of separate data summaries are included on one large sheet, to facilitate their inspection, rather than appearing on separate sheets.

The "horse blanket" is used by senior Army management to provide a composite view of the force. It includes both overall summaries of the force and summaries of problems within the force.

It will be used, in a simplified form, to illustrate the application of the three data summary methodologies discussed.

Page 1 of 3 To EXIT - SPACE bar To READ - PgDn #p

ORGANIZATION OF THE "HORSEBLANKET"

The horse blanket is organized into a series of 'panels', each of which displays a different set of data. In all, there are nine sets of data. Of the nine sets of data, (3) use the frequency distribution technique, (3) use the cross-tabulation technique, and (3) are data tables.

The panels using the frequency distribution technique show several types of information simultaneously. The panels using the cross-tabulation technique provide totals for the columns of data, but do not provide row totals.

A simplified layout of the overall "horse blanket" is shown on the next page. The layout of the information in the individual panels, can be seen by using the F3 key to select the panel--then using the F4 key to generate the panel layout.

Page 2 of 3 To EXIT - SPACE bar To READ - PgUp/PgDn #p

LAYOUT OF THE "HORSE BLANKET" [Simplified]

<table>
<tr><td>#mStructure#m
(crosstab)</td><td rowspan="2">#mRequirements-Offsets#m
(freq distr)</td></tr>
<tr><td rowspan="2">#mAllocation Rules#m
(data table)</td></tr>
<tr><td rowspan="2">#mPOM Program vs TAA#m
(freq distr)</td></tr>
<tr><td>#mPersonnel Problems#m
(data table)</td></tr>
<tr><td>#mEquipment Problems#m
(data table)</td><td>#mCurrent vs Proposed Forces#m
(crosstab)</td></tr>
<tr><td>#mUnit Status#m
(freq distr)</td><td>#mProgram Changes#m
(crosstab)</td></tr>
</table>

Page 3 of 3 To EXIT - SPACE bar To READ - PgUp

/end

HYPER Structure

'STRUCTURE' CROSS TABULATION (HORSE BLANKET)

TYPE	LVL 1	LVL 2	LVL 3	TYP B	CADRE
OFF	0	0	0	0	0
WO	0	0	0	0	0
ENL	0	0	0	0	0
TOT	0	0	0	0	0

Page 1 of 1 For #mGlossary#m - F4 To CONTINUE - SPACE bar
/end

HYPER Allocation Rules

'ALLOCATION RULES' DATA TABLE (HORSE BLANKET)

THEATER	PRIOR TAA	CURRENT TAA
NATO	.....	.....
SWA	.....	.....
NEA	.....	.....
OTHER	.....	.....

Page 1 of 1 For #mGlossary#m - F4 To CONTINUE - SPACE bar
/end

HYPER Personnel Problems

'PERSONNEL PROBLEMS' DATA TABLE (HORSE BLANKET)

MOS	IDENTITY	REMARKS
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Page 1 of 1 For #mGlossary#m - F4 To CONTINUE - SPACE bar
/end

HYPER Equipment Problems

'EQUIPMENT' DATA TABLE (HORSE BLANKET)

LIN	NOMENCLATURE	REMARKS
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Page 1 of 1 For #mGlossary#m - F4 To CONTINUE - SPACE bar
/end

HYPER Unit Status

'UNIT STATUS' FREQUENCY DISTRIBUTIONS (HORSE BLANKET)

COMPO	AVAIL UNITS	AVERAGE RATING	C1-C3	PERS	C4-C5 EQUIP	OTHER
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0

Page 1 of 1 For #mGlossary#m - F4 To CONTINUE - SPACE bar
/end

HYPER Requirements-Offsets

'REQUIREMENTS-OFFSETS' FREQUENCY DISRTIBUTIONS (HORSE BLANKET)

	THEATER	FPR 93	TAA 96	ALT 1	ALT 2	CAP ALGN	PANEL RECOM
RQMTS	NATO	0	0	0	0	0	0
	SWA	0	0	0	0	0	0
	NEA	0	0	0	0	0	0
	HOST - NATO	0	0	0	0	0	0
	DIRECT NEA	0	0	0	0	0	0
OFFSETS	HOST - NATO	0	0	0	0	0	0
	INDIRECT NEA	0	0	0	0	0	0
	LOGCAP - SWA	0	0	0	0	0	0
	TOTALS	0	0	0	0	0	0

Page 1 of 1 For #mGlossary#m - F4 To CONTINUE - SPACE bar
/end

HYPER POM Program vs TAA

'POM PROGRAM VS TAA' FREQUENCY DISTRIBUTIONS (HORSE BLANKET)

COMPO	90		91		92		93		94		96		96
	94	96	94	96	94	96	94	96	94	96	94	96	96
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
SUB-TOT	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL											0	0	0

Page 1 of 1 For #mGlossary#m - F4 To CONTINUE - SPACE bar
/end

HYPER Current vs Proposed Forces

'CURRENT VS PROPOSED' CROSS TABULATIONS (HORSE BLANKET)

CURRENT - FY 90					PROPOSED - FY 96				
COMMAND	ALO 1	ALO 2	ALO 3	ALO >3	COMMAND	ALO 1	ALO 2	ALO 3	ALO >3
FORSCOM	0	0	0	0	FORSCOM	0	0	0	0
USAREUR	0	0	0	0	USAREUR	0	0	0	0
WESTCOM	0	0	0	0	WESTCOM	0	0	0	0
EUSA	0	0	0	0	EUSA	0	0	0	0
NG	0	0	0	0	NG	0	0	0	0
AR	0	0	0	0	AR	0	0	0	0
OTHER	0	0	0	0	OTHER	0	0	0	0

Page 1 of 1 For #mGlossary#m - F4 To CONTINUE - SPACE bar
/end

HYPER Program Changes

'PROGRAM CHANGES' CROSS TABULATION (HORSE BLANKET)

COMPO	OFF	WO	ENL	AGG
ARMY	0	0	0	0
GUARD	0	0	0	0
RESERVE	0	0	0	0
TOT	0	0	0	0

Page 1 of 1 For #mGlossary#m - F4 To CONTINUE - SPACE bar
/end

PART 6. ISSUE DATA RESOURCES

HYPER Introduction

INTRODUCTION

The ODCSLOG planner has local access to data on Army-wide unit equipment assets, and a capability to process this data for analysis of the logistics supportability of these units.

This capability is provided by the Equipment Distribution Module (EDM) of the logistics decision support system (LOG-DSS) through its ability to generate families of data reports.

The EDM operates in a secure environment and is accessable to registered users. Individual ARSTAF members may become registered users or they may request the generation of system information by the system operators in DALO-SMD.

(Cont'd)

Page 1 of 3 To Exit - SPACE bar To Read - PgDn#p

A NOTE ON THE TIMELINESS OF DATA IN THE EDM REPORTS

The data reports generated by the EDM are based on data files generated by other Army data systems.

Each of these systems has its own proponent and a nominal schedule for data releases. However, release delays occur and the EDM system operators (DALO-SMD) should be consulted about the timeliness of any particular EDM data product.

On balance, the data reports must be carefully scrutinized for the currency of the data they contain. The user must note the 'as-of' date of the data to identify its currency, as distinguished from the 'run_date' on which the report is generated.

In the data report descriptions provided herein, a data update is indicated for each report. Individual reports however, should be examined for its particular 'as-of' date, and its usefulness gauged by both the date and the intended use of the data. (Cont'd)

Page 2 of 3 To Exit - SPACE bar To Read - PgUp/PgDn#p

SYSTEM ACCESS

The points of contact for the access to Equipment Distribution Module are:

- o For administration: DALO-DSMO, Rm 2D558, the PENTAGON.
- o For system operation: DALO-SMD, Rm 2D575, the PENTAGON.

Information on operation of the EDM is provided in the following documentation:

Equipment Distribution Module
User's Guide
Logistics Decision Support System
31 January 1989

Page 3 of 3 To Exit - SPACE bar To Read - PgUp/PgDn#p

The following pages sumarize the types of reports available from the LOG-DSS Equipment Distribution Module.

Page 3 of 3 To Exit - SPACE bar To Read - PgUp
/end

HYPER EDM User's Guide

HYPER Asset Distribution Reports

The family of ASSET DISTRIBUTION REPORTS consists of the following computer generated summaries.

- o (#mREQVAL#m) Requisition Validation Report
- o (#mTAEDP#m) Total Army Equipment Distribution Program Report
- o (#mGREENBOOK#m) Army Distribution Greenbook Report
- o (#mMACPAC#m) Major Claimant / Force Package Report
- o (#mUNITREP#m) Monthly Readiness Review Report

For a description and simplifed illustration of the reports, press F3 key to select a report - then press F4 for display.

Page 1 of 1 To EXIT - Space bar

/end

HYPER Supportability Analysis Reports

The family of SUPPORTABILITY ANALYSIS REPORTS consists of the following computer generated summaries.:

- o (#mACTCON#m) Summary of Unit Activiations/Conversions Report
- o (#mIMPACT#m) Readiness Impact Summary by FY or UIC/FY Report
- o (#mLINSUM#m) Total Army LIN Summary by FY Report
- o (#mLINFIX#m) C-4 Level LIN/Cost to Fix to C-3 Level Report
- o (#mUICSUM#m) C-4 UIC Summary Report
- o (#mUICEOH#m) UIC EOH Detailed Report by FY

For a description and simplifed illustration of the reports, press F3 key to select a report - then press F4 for display.

Page 1 of 1 To EXIT - Space bar

/end

HYPER REQVAL

REQUISITION VALIDATION (REQVAL) REPORT

Basic Data: Item (LIN) distribution across force
By: UIC, MACOM, TPSN/SRC, Force Level (Press F4 Key for Glossary of terms used)
Use of Data: Identify completeness of item distribution
Data Source/Data Update: REQVAL / Monthly

(cont'd)

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgDn#p

" ASSET DISTRIBUTION REPORT (REQRPDS) [Simplified] "

UIC: WAALAA ASGN CODE:
TPSN: LOC CODE: PROJ CODE:
ERC: STA CODE: DAMPL:

NOMENCLATURE: (NAME OF LIN)

LIN: X40009 ERC:
NSN: RICC:
SSN: CMC:

	FY __	FY __
REQUIRED	10	10
AUTHORIZED:	10	10
FILL OBJ:	10	10
NET POSITION:	10	10
*ON HAND:	10	10
*IN TRANSIT:	10	10
PERCENT FILL:	100	100

* ON HAND INCLUDES IN TRANSIT

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgUp
/end

HYPER TAEDP

TOTAL ARMY EQUIPMENT DISTRIBUTION PROGRAM (TAEDP) REPORT

Basic Data: Equipment distribution to Claimants by FY
By: Organization/Deployment Codes: UIC, SRC, TPSN, MACOM, SHL 2, DEPL-CD, DEPL-LOC, DAMPL, POMCUS, ADCON, FAD, COMPO, ATCO, or by Commodity Codes: SSN, LIN, NSN, CMC, RICC, ERC
Use of Data: Identify completeness of item distribution
Data Source/Data Update: Multiple / 3 to 9 Months

(cont'd)

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgDn#p

ASSET DISTRIBUTION REFORT (ADMRPDS) [Simplified]

UIC:	MACOM:	SHL:	DEPL Code:	DEPL LOC:
DAMPL:	POMCUS:	ADCON:	RICC:	FAD:
SSN:	CMC:	ERC:	TPSN:	COMPO:
NSN:		SRC:		ACT CODE:
LIN:				

	FY__	FY__	FY__	FY__	FY__	FY__	FY__
REQ:							
AUTH:							
OH:							
FILL:							

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgUp

/end

HYPER GREENBOOK

ARMY DISTRIBUTION (GREENBOOK) REPORT

Basic Data: Distribution of key items of equipment to selected theaters by FY
By: CENCOM, PACOM, EUSA, EUCOM (Press F4 Key for Glossary of terms used)
Use of Data: Identify completeness of item distribution
Data Source/Data Update: Multiple / 3 to 9 Months

To Exit - SPACE bar For #mGlossary#m - F4
/end

HYPER MACPAC

MAJOR CLAIMANT/FORCE PACKAGE (107/108) REPORT

Basic Data: Selected item distribution by Major Claimant (MACOM) or Force Package
By: LIN, SSN, FY (range) (Press F4 Key for Glossary of terms used)
Use of Data: Identify completeness of item distribution
Data Source/Data Update: Multiple / 3 to 9 Months

(cont'd)

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgDn#p

ASSET DISTRIBUTION SUMMARY (EQSDDAT) [Simplified]

LIN: _____ NSN: _____ CMC: _____
FY__

MAJOR CLAIMANT (LIST)	TOE FIL OBJ	TDA FIL OBJ	MOB FIL OBJ	M/F FIL OBJ	TOT FIL OBJ	TOE ASET OH	TDA ASET OH
EUROPE	0	0	0	0	0	0	0

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgUp
/end

HYPER UNITREP

MONTHLY READINESS REVIEW (UNITREP) REPORT

Basic Data: Readiness status of major Army populations

By: Total Army or (12) selected groupings of the force

Use of Data: Identify population readiness

Data Source/Data Update: ODCSOPS disk / Monthly

(cont'd)

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgDn #p

UNIT REPORTING SYSTEM/EQUIPMENT (UROOM67-1) [Simplified]

POPULATIONS	ALO 1 TOT	ALO 1 C1	ALO 1 C2	ALO 1 C3	ALO 1 C4
Total Army	400	100	100	100	100
Total Army - (AVN)	400	100	100	100	100
Active Army	400	100	100	100	100
National Guard	400	100	100	100	100
Army Reserve	400	100	100	100	100
For Deploy CS/CSS	400	100	100	100	100
M-Day Short CS/CCS	400	100	100	100	100
CONUS CS/CSS - (M-day)	400	100	100	100	100
Aviation	400	100	100	100	100
Total Army Combat	400	100	100	100	100
Active Army Combat	400	100	100	100	100
National Guard Combat	400	100	100	100	100
Army Reserve Combat	400	100	100	100	100

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgUp/PgDn #p

UNIT REPORTING SYSTEM/EQUIPMENT (UROOM67-2) [Simplified]
POPULATION: TOTAL ARMY

YR/MO	ALO 1	TOT	C1	C2	C3	C4
8711		400	100	100	100	100
8712		400	100	100	100	100
8801		400	100	100	100	100
8802		400	100	100	100	100
8803		400	100	100	100	100
8804		400	100	100	100	100
8805		400	100	100	100	100
8806		400	100	100	100	100
8807		400	100	100	100	100
8808		400	100	100	100	100
8809		400	100	100	100	100
8810		400	100	100	100	100
8812		400	100	100	100	100

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgUp
/end

HYPER ACTCON

UNIT ACTIVIATIONS/CONVERSIONS (ACTCON) REPORT

Basic Data: Number of effected units by FY

By: COMPO, EOH Level
(Press F4 Key for Glossary of terms used)

Use of Data: Identify force changes

Data Source/Data Update: Multiple/Monthly & 3 to 9 Months

(cont'd)

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgDn#p

EOH SUMMARY ACTIVATIONS/CONVERSIONS (EQSQCDP) [Simplified]

FY__

EOH Level	Activations			Conversions		
	COMPO 1	COMPO 2	COMPO 3	COMPO 1	COMPO 2	COMPO 3
C1	10	10	10	10	10	10
C2	10	10	10	10	10	10
C3	10	10	10	10	10	10
C4	10	10	10	10	10	10
Total	40	40	40	40	40	40

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgDn#p
/end

HYPER IMPACT

READINESS IMPACT SUMMARY (IMPACT) REPORT

Basic Data: Identify C-levels for UIC/LIN and Fix-costs

By: Target FY, in DAMPL sequence
(Press F4 Key for Glossary of terms used)

Use of Data: Identify population readiness

Data Source/Data Update: Multiple/Monthly & 3 to 9 Months

(cont'd)

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgDn#p

READINESS IMPACT SUMMARY BY UIC/FY (EQSUFPD) [Simplified]

FY__

UIC	FULL SRC	DAMPL	UNIT EOH	LINS AT C1	C2	C3	C4	LINS TO FIX C1	C2	C3
WPDYAA	17235J410100	11111	E1	15	0	1	1	0	0	0
WPF3AA	17235J410100	22222	E2	13	2	1	1	3	1	0
WPGCAA	17235J410100	33333	E3	9	2	3	3	7	5	2
WPGNAA	17235J410100	44444	E4	3	2	2	10	13	11	9

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgUp#p
/end

HYPER LINSUM

TOTAL ARMY LIN SUMMARY (LINSUM) REPORT

Basic Data: Required and projected on-hand quantities for each LIN in the Army

By: FY, LIN (50 max)
(Press F4 Key for Glossary of terms used)

Use of Data: Identify overall LIN shortages in Army

Data Source/Data Update: Multiple/Monthly & 3 to 9 Months

(cont'd)

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgDn#p

Total Army LIN Summary by FY (EQSTADP) [Simplified]

FY__

LIN	Total Rqmts	ERC A Rqmts	Total Proj OH	Total Short	--- ERC A --- Short	Cost
X40009	1100	500	50	1050	450	4500 K
.						
.						

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgUp#p

/end

HYPER LINFIX

C-4 LIN ROLL-UP/COST-TO-FIX TO C-3 (LINFIX) REPORT

Basic Data: Identity and fix costs for LIN shortfalls
By: LIN in UIC target population (Press F4 Key for Glossary of terms used)
Use of Data: Identify get-well costs for short items
Data Source/Data Update: TAEDP / 3 to 9 Months

(cont'd)

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgDn#p

C4 LIN Roll Up/Cost to Fix to C3 (EQS4DP) [Simplified]
FY __

LIN	PR	RQD	P OH	Short	Cost to Fix to C3	Sub Total	No of C4 UIC
B07126	Y	10	06	01	50 K	50 K	01
C68715	Y	10	15	02	400 K	450 K	01
E76866	Y	10	00	07	70 K	520 K	01
L40063	Y	20	10	04	400 K	920 K	02
L91975	Y	20	08	06	600 K	1520 K	02
N15518	Y	40	24	04	40 K	1560 K	04
R94977	Y	10	00	07	35 K	1595 K	01

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgUp
/end

HYPER UICSUM

C-4 UIC SUMMARY (UICSUM) REPORT

Basic Data: Required, authorized and EOH quantities of C-4 LIN in C-4 units with fix-costs

By: FY, UIC (50 max) (Press F4 Key for Glossary of terms used)

Use of Data: Identify get-well costs for short UIC

Data Source/Data Update: Multiple/Monthly & 3 to 9 Months

(cont'd)

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgDn #p

C4 UIC Summary Report (EQSUDP)
FY __

UIC	SRC	C4 LIN	PR	RQD	P OH	SHORT
WPGNAA	1723J410100	B07126	Y	10	06	01
WPGNAA	1723J410100	C68719	Y	10	05	02
WPGNAA	1723J410100	E76866	Y	10	00	07
WPGNAA	1723J410100	H55706	Y	10	05	02
WPGNAA	1723J410100	J35813	Y	10	00	07
WPGNAA	1723J410100	K57392	Y	10	06	01
WPGNAA	1723J410100	L40063	Y	10	05	02
WPGNAA	1723J410100	L91975	Y	10	04	03

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgUp
/end

HYPER UICEOH

UIC EOH DETAIL (UICEOH) REPORT

Basic Data: LIN data including ratings within UIC
By: FY, UIC (20 max) (Press F4 Key for Glossary of terms used)
Use of Data: Identify target UIC population readiness
Data Source/Data Update: Multiple/Monthly & 3 to 9 Months

(cont'd)

To Exit - SPACE bar For #mGlossary#m - F4 To Read - PgDn#p

UIC EOH Detailed Report (EQSUEDR)
FY__

UIC: WPGCAA UIC EOH Rating: E3 SRC: 17235J410100

LIN	Nomenclature	LIN Rt	Reqd	Auth	OH	Procure
A22496	AIMING CIRCLE	E1	10	10	10	Y
B07126	AXEL CABLE REEL	E1	10	10	10	Y
K57392	HOW LT TOW	E1	10	9	7	Y
L40063	LASER INFRARED	E4	10	8	5	Y
L91975	MG CAL .50	E4	10	8	4	Y

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PART 7. MULTIPLE MODULES (GLOSSARY)

GLOSSARY

ADCON	administrative control code
ALO	authorized level of organization
AR	Army regulation
ARSTAF	Army Staff
CMC	commidity manager code
COMPO	component (of force) code
CSS	combat service support
DAMPL	Department of Army Master Priority List
DEPL	deployment
DSS	decision support system
EEA	essential element of analysis
EDATE	effective date

Page 1 of 4 To EXIT - SPACE bar To READ - PgDn#p

GLOSSARY

EOH	equipment on hand
ERC	equipment readiness code
FAS	Force Accounting System
FIL	fill
FY	fiscal year
K	thousand
LIN	line item number
loc	location
LOI	logistics organizational integrator
LOIC	Logistics Organizational Integrator Committee
LOG	logistics
LPSA	Logistics Programing Support Activity

Page 2 of 4 To EXIT - SPACE bar To READ - PgUp/PgDn#p

GLOSSARY

MACOM	major command
MTOE	modification table of organization and equipment
NO	number
NSN	national stock number
OH	on hand
OI	organizational integrator
ODCSLOG	Office of the Deputy Chief of Staff for Logistics
ODCSOPS	Office of the Deputy Chief of Staff for Operations and Plans
POC	point of contact
POMCUS	prepositioned material configured to unit sets
PPBES	Planning, Programming, Budgeting and Execution System

GLOSSARY

RICC	reportable item control code
RQMTS	requirements
SRC	standard requirement code
SSN	standard study number
TAA	Total Army Analysis
TAADS	The Army Authorization Document System
TAEDP	Total Army Equipment Distribution Program
TAP	The Army Plan
TDA	table of distribution and allowances
TPSN	troop program sequence number
UIC	unit identification code

APPENDIX F

LOG PLANNER USER'S MANUAL

This appendix contains a reproduction of the user's manual for the Logistics Force Planner Assistant, which is provided separately as CAA Documentation CAA-D-89-4.

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DOCUMENTATION
CAA-D-89-4

LOGISTICS FORCE PLANNER ASSISTANT (LOG PLANNER)

USER'S MANUAL

SEPTEMBER 1989

PREPARED BY
FORCE SYSTEMS DIRECTORATE

US ARMY CONCEPTS ANALYSIS AGENCY
8120 WOODMONT AVENUE
BETHESDA, MARYLAND 20814-2797

DISCLAIMER

The findings of this report are not to be construed as an official Department of the Army position, policy, or decision unless so designated by other official documentation. Comments or suggestions should be addressed to:

Director
US Army Concepts Analysis Agency
ATTN: CSCA-FS
8120 Woodmont Avenue
Bethesda, MD 20814-2797

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FIELD	GROUP	SUB-GROUP	

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

This document contains the procedures for use of the Logistics Force Planner Assistant (LOG PLANNER) system. The LOG PLANNER was developed to provide Army Staff logistics planners with an automated source of information about planning of the Army force structure associated with the Total Army Analysis (TAA) process. The study effort, documented in CAA study report CAA-SR-89-24, included the preparation of this manual to document the procedures for the loading and operation of the system, including the use of the built-in text file editor for modification of the system information holdings.

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22a. NAME OF RESPONSIBLE INDIVIDUAL Mr. James Connelly	22b. TELEPHONE (Include Area Code) (202) 295-1639	22c. OFFICE SYMBOL CSCA-FS

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UNCLASSIFIED

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DOCUMENTATION
CAA-D-89-4

LOGISTICS FORCE PLANNER ASSISTANT (LOG PLANNER)

USER'S MANUAL

September 1989

Prepared by

FORCE SYSTEMS DIRECTORATE

US Army Concepts Analysis Agency
8120 Woodmont Avenue
Bethesda, Maryland 20814-2797

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This document is the User's Manual to accompany the Logistics Force Planner Assistant (LOG PLANNER) system. The system was developed by the US Army Concepts Analysis Agency for the Department of the Army, Deputy Chief of Staff for Logistics (DALO-PLF) and is documented in Study Report CAA-SR-89-24. The User's Manual is prepared as a separate document for the convenience of the LOG PLANNER system user.

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CONTENTS

PART 1 - GENERAL

1-1. PURPOSE OF MANUAL

This manual is intended to assist, you, the user of the LOG PLANNER, with the installation of the system on the host microcomputer, and when this is done, guide you through the initial use of the system.

The system itself is menu-driven. That is, you will provide inputs to the system by selection from a set of choices presented by the system. No text inputs are required. In addition to the use of the menus for selection, the system includes instructions with each display for continuation to the next step in the operation.

The emphasis in this manual, therefore, is on the procedures associated with the menu selections and the procedures for inspection of the resultant information displays. These procedures, which allow movement among the various information holdings of the system, are collectively referred to as "navigation" procedures.

Contingency procedures are also provided for recovery of the system operation when inadvertent navigation errors are made or when error conditions in system operation are experienced.

1-2. REFERENCES

1. US Army Concepts Analysis Agency, CAA-SR-89-24, Logistics Force Planner Assistant, September 1989.

2. Department of the Army, AR 71-11, Total Army Analysis.

3. General Research Corporation, Equipment Distribution Module Users' Guide, Logistics Decision Support System, January 1989.

1-3. TERMS AND ABBREVIATIONS

The terms and abbreviations used in this manual are defined below. In addition, the system itself uses hypertext technology to provide an online glossary of terms which may be immediately referenced when specialized terms or abbreviations appear in the text. The system also uses the hypertext technology to provide extended descriptions of concepts briefly cited in the main text.

billpayer	the unit(s) in the force structure which are given up to allow other unit(s) to be included in the force structure
command	a coded instruction to a program to carry out a specific operation
directory	a collection of files stored on a hard disk grouped and accessed under a specific directory name
DOS	Disk Operating System - the collection of software used by the host computer to manage its internal operations
host	the microcomputer on which a program is loaded for use
hypertext	A special text handling feature which allows an item of text in one display to serve as key to the display of text which explains or amplifies the key item
editor	a specialized computer program used to create and modify computer files
hard disk	the component of the host computer which holds the files used during operation of the computer
on-line	an aspect of the program use which occurs while the system is operating
interactive	the exchange of information, on an immediate basis, between the user and the computer
log-on	the initial display of information by the program announcing it is ready to be used
menu	a specific set of choices presented by the system to guide its operation
navigate	the process of issuing control instructions to the program to accomplish a specific result
option	a choice presented by the system appearing as one of a set of choices in a menu

prompt	a request for instructions by the computer
subdirectory	a collection of files within a subdivision of a directory grouped and accessed under a specific subdirectory name which includes the name of the directory of which it is a subdivision
system	a term of convenience which may refer to either the host computer or an installed program such as the LOG PLANNER, as determined by the context of the usage. By convention in this manual, system always refers to the LOG PLANNER
window	a portion of the computer display screen outlined by a rectangular border in which system information is displayed. More than one window may be displayed at the same time, with the more recent display overlaying the earlier one

PART 2 - SYSTEM SUMMARY

2-1. BACKGROUND

The Logistics Force Planner Assistant (LOG PLANNER) has been developed to provide you, as a logistics planner, with basic information about the Army force structuring process, and in particular, the activities in the process which develop the combat service support elements the force. It has a tutorial mode of operation which will provide you with a systematic review of the overall process. If you are a more experienced planner, you may directly access specific information about the process in support of your planning activity.

2-2. SYSTEM DESCRIPTION

The LOG PLANNER is a microcomputer-based knowledge processing system which operates interactively with the user. The system is interactive in that it immediately responds to requests of information with displays of one or more pages of text describing the entity or process of interest. Your requests, as user, are handled through a system of menus which are arranged to refine your selection from a general to a specific item of interest. You can readily control the cycling of the system from one inquiry to the next. For a detailed description of the system, see Reference 1.

2-3. SYSTEM MODES

a. Normal Mode. In this mode, a progression of menus is used to identify the information of interest and the system then responds with the selected information. This mode is associated with users who are familiar both the system and the logistics planning process and who require information in connection with a current planning action.

b. Orientation Mode. In this mode, the system provides a guided tour through the system information holdings. Access to this mode is offered by menu selection of the option "Use of LOG PLANNER" immediately after the system log-on display.

2-4. SYSTEM ITEMS. The items necessary to use the system are as follows:

System Items

Qty	Item	Remarks
1	Microcomputer, 80286 chip[a] or later with 512K memory (min)	Onsite item
-	System distribution disk[b]	Provided by system developer (CAA)

[a]IBM AT and compatible machines.
[b]A single, site distriibution, disk may be used to instal: the system on as many host microcomputers as needed.

PART 3 - SYSTEM INSTALLATION PROCEDURES

3-1. HOST COMPUTER HARD DISK. For acceptable response times, the LOG PLANNER must be installed on a host microcomputer with a hard disk.

3-2. INSTALLING LOG PLANNER

Step 1a. If system is not already on, power-up the computer and wait for the DOS prompt, typically: c:>

Step 1b. If system comes up into a menu, select the option which returns the system to the DOS prompt

Step 2. Insert the distribution disk into drive A and enter the command: a:load_lp

Step 3. Observe the copying of individual files into the host computer

Step 4. Immediately after the copy operation, observe the display of a short sequence of blank windows, as the system reformats from the default window size to the larger window size used by LOG PLANNER. The last window in the sequence is the log-on display for the LOG PLANNER which provides a brief introduction to the system

Step 5. From this point on, follow the instructions provided on each screen to navigate through the system. If difficulty is encountered in following the screen instructions and the unexpected happens, refer to Part 8 - Contingency Procedures, especially paragraph 8-2 (Incorrect Navigation Procedure) for corrective action. For additional information about the system operation, see the following parts of this manual:

PART 6 - INFORMATION ACCESS
PART 7 - NAVIGATION PROCEDURES

PART 4 - SYSTEM START-UP PROCEDURES

4-1. INTRODUCTION

The manner of starting the installed system is dependent upon whether the local computer operations management provides for operation of the LOG PLANNER from a master applications menu on the host computer. Three possible cases related to access to such a menu system are considered and a start procedure identified for each case. For additional information about system operation, also see the following parts of this manual:

PART 6 - INFORMATION ACCESS
PART 7 - NAVIGATION PROCEDURES
PART 8 - CONTINGENCY PROCEDURES

4-2. CASE 1 - LOG PLANNER ON HOST COMPUTER MENU

Step 1. Make the LOG PLANNER selection on menu, and the system will be activated

Step 2. The activation is indicated by the display of a short sequence of blank windows, as the system reformats from a default window size to the larger window size used by LOG PLANNER. The last window in the sequence is the LOG PLANNER log-on display which provides a brief introduction to the system

Step 3. From this point on, follow the instructions provided on each screen to navigate through the system

4-3. CASE 2 - LOG PLANNER NOT ON HOST COMPUTER MENU

Step 1. Select the menu option which returns control to the DOS. Observe the DOS prompt to appear, typically: c:>

Step 2. Select the subdirectory holding system with command:
cd\log_plnr

Step 3. Activate the system with command: run_plnr

Step 4. Activation is indicated by the display of a short sequence of blank windows, as the system reformats from a default window size to the larger window size used by LOG PLANNER. The last window in the sequence is the LOG PLANNER log-on display which provides brief introduction to the system

Step 5. From this point on, follow the instructions provided on each screen to navigate through the system

4-4. CASE 3 - NO HOST COMPUTER MENU

Step 1. Clear any current application and return system to DOS prompt

Step 2. Select subdirectory holding the system command:
cd\log_plnr

Step 3. Activate system with command: run_plnr

Step 4. Activation is indicated by the display of a short sequence of blank windows, as the system reformats from the default window size to the larger window size used by LOG PLANNER. The last window in the sequence is the LOG PLANNER log-on display which provides a brief introduction to the system

Step 5. From this point on, follow the instructions provided on each screen to navigate through the system

PART 5 - SYSTEM ORIENTATION PROCEDURES

5-1. INTRODUCTION

The LOG PLANNER has two orientation features, both of which are available on-line (while the system is operating) for introducing new users to the operation of the system. One feature is the ON-LINE SUMMARY which is accessed as an option immediately after the system is activated. The other feature is the ON-LINE TUTORIAL. The tutorial takes the form of a guided tour of the system information holdings. The tutorial is accessed as an option at the end of the ON-LINE SUMMARY feature.

5-2. ON-LINE SUMMARY

The on-line summary is available immediately after the system is brought up. The availability of the summary is identified in the last paragraph of the log-on display, where your attention is directed to the selection of the option:

"Use of the LOG PLANNER"

from the menu on the following screen display. When this selection is made, the system enters a sequence of displays which describe, in turn, the following:

- CONTROL OF THE LOG PLANNER
- INFORMATION AVAILABLE FROM LOG PLANNER
- LOG PLANNER TUTORIAL MECHANISM

As each of these topics is addressed, you are directed to use the several means of control of the displays (referred to display navigation, see PART 7). The summary thus provides both information about the LOG PLANNER and the experience of the practical operation of the LOG PLANNER.

5-3. ON-LINE TUTORIAL

a. Nature of the Tutorial. The system tutorial is a guided tour of the information available in the LOG PLANNER. When you select the tutorial, the system sets up a special selection on each menu designated:

"*** Tutorial Selection ***"

By selecting this entry each time a menu is presented, the system automatically cycles through each of its information holdings in turn. While the tutorial is running, you also have the opportunity to make your own selection of specific subtopics of information within the tutorial topic.

b. Selection of the Tutorial

The tutorial is selected after completion of the SYSTEM SUMMARY material. You are explicitly asked whether you wish to proceed and offered the following choices.

- Normal Operation
- Operation in Tutorial Mode
- Exit LOG PLANNER

The selection of the item "Operation in Tutorial Mode" will initiate the tutorial process. The first information presented is a "Tutorial Recap." This recap is a reminder of the instructions displayed earlier in the summary, concerning the operation of the system, including the use of the "Tutorial Selection" each time it is presented.

c. Excursions From the Tutorial

With the system operating in the Tutorial Mode (indicated by the option "*** Tutorial Selection ***" in the system menus), it is possible to depart from the tutorial, with no loss of continuity in the tutorial sequence. Simply make any other menu selection of interest in place of "Tutorial Selection." The system will respond by presenting the information associated with this choice. Follow the local screen instructions to review and then leave this information selection. The original menu with the "Tutorial Selection" will reappear, and you may proceed with the tutorial or again make a different selection.

d. Exit From the Tutorial

Case 1 - Explicit Exit

The tutorial advances through the information holdings one at a time. After the last holding has been displayed, you will be returned to the choices which started the tutorial session, namely:

- Normal Operation
- Operation in Tutorial Mode
- Exit LOG PLANNER

Selection of either the "Normal Operation" option or the "Exit LOG PLANNER" will exit the tutorial mode. The first option leaves the system up on the host computer, and the second terminates operation on the host. Also note that it is possible to repeat the tutorial. Selection of the tutorial will reset its mechanism so that it will again cycle through all the holdings.

Case 2 - Implicit Exit

As noted above in "Excursions from the Tutorial," it is possible to use the system to make any selection from any menu present while the tutorial mode is active. It is possible, therefore, to implicitly exit the tutorial by simply ignoring the "Tutorial Selection" choice in the menu and making any other choice. This includes any or all of the "Exit" choices, including the choice to exit entirely from the system.

PART 6 - SYSTEM INFORMATION ACCESS

6-1. TYPES OF INFORMATION. The LOG PLANNER contains four types of information, each of which may be used to support a particular aspect of logistics planning.

6-2. TOTAL ARMY ANALYSIS INFORMATION. This information type is a description of the Total Army Analysis (TAA) (Reference 2). The TAA is a multiyear sequence of events which occur in the development and review of the Army force structure. The information may be used as follows:

- Familiarization with overall TAA process.
- Provide a context for other information available from the LOG PLANNER.

This information is accessed using the MENU NAVIGATION PROCEDURE (paragraph 7-2) to select the menu option:

"TAA - Total Army Analysis Process"

After making the menu selection, follow the instructions on the subsequent screens using the PAGE NAVIGATION PROCEDURE (paragraph 7-3), HYPERTEXT NAVIGATION PROCEDURE (paragraph 7-4), and GLOSSARY NAVIGATION PROCEDURE (paragraph 7-5).

6-3. ISSUE COORDINATION MANAGEMENT INFORMATION. This information type is a summary of the participants, activities, and points of contact associated with the conduct of the TAA process. The information may be used as follows:

- Identification of sources of information and functional expertise.
- Reference for nature and timing of TAA activities.
- Guide in preparation of action messages and reports.

This information is accessed using the MENU NAVIGATION PROCEDURE (paragraph 7-2) to select the menu option:

"ICM - Issue Coordination Management"

After making the menu selection, follow the instructions on the subsequent screens using the PAGE NAVIGATION PROCEDURE (paragraph 7-3), HYPERTEXT NAVIGATION PROCEDURE (paragraph 7-4), and GLOSSARY NAVIGATION PROCEDURE (paragraph 7-5).

6-4. ISSUE ANALYSIS METHODOLOGY INFORMATION. This information type is a description of techniques available for analysis and review of issues which arise in the TAA Process. The information may be used as a guide to generating and/or evaluating:

- Summaries of information about the structure and composition of the force.
- Tradeoffs among alternatives for "Billpayer" units.

This information is accessed using the MENU NAVIGATION PROCEDURE (paragraph 7-2) to select the menu option:

"IAM - Issue Analysis Methodology"

After making the menu selection, follow the instructions on the subsequent screens using the PAGE NAVIGATION PROCEDURE (paragraph 7-3), HYPERTEXT NAVIGATION PROCEDURE (paragraph 7-4), and GLOSSARY NAVIGATION PROCEDURE (paragraph 7-5).

6-5. ISSUE DATA RESOURCES INFORMATION. This information type is a description of the information on the data resources available to logistics planners from the Equipment Distribution Module of the ODCSLOG Logistics Decision Support System (LOG-DSS) (Reference 3). The information may be used as follows:

- Identify item and unit equipment distributions using LOG-DSS "Asset Distribution Reports."
- Identify item and unit equipment shortfalls and "get well" costs using LOG-DSS "Supportability Analysis Reports."

This information is accessed using the MENU NAVIGATION PROCEDURE (paragraph 7-2) to select the menu option:

"IDR - Issue Data Resources"

After making the menu selection, follow the instructions on the subsequent screens using the PAGE NAVIGATION PROCEDURE (paragraph 7-3), HYPERTEXT NAVIGATION PROCEDURE (paragraph 7-4), and GLOSSARY NAVIGATION PROCEDURE (paragraph 7-5).

PART 7 - SYSTEM NAVIGATION PROCEDURES

7-1. FORMS OF NAVIGATION. The LOG PLANNER is organized so all interaction with the system is by means of selection among alternatives--no alphanumeric inputs are required. The selection process, referred to as "navigation," occurs in four forms:

- Menu Navigation - selection from a menu.
- Page Navigation - movement through the individual pages of a multipage description generated by a menu selection.
- Hypertext Navigation - selection of highlighted items of text within a page, to generate additional information about the item.
- Glossary Navigation - selection of the online glossary for immediate clarification of text entries in a particular information display.

7-2. MENU NAVIGATION PROCEDURE

The LOG PLANNER is a menu-driven system. To use the system, respond, in turn, to the series of menus presented to progressively refine the request for information from the general to the specific. To make a menu selection, follow the instructions on the screen to use the UP and DOWN ARROW keys of the numeric keypad section of the keyboard and then press the ENTER key. Each menu includes an entry for exiting back to the next higher menu.

7-3. PAGE NAVIGATION PROCEDURE

Once the information of interest has been accessed through the menu process, follow the instructions at the bottom of the screen. These instructions include use of the PG UP and PG DN keys on the numeric keypad to move forward and backward through the pages of a multipage set of information. Each page is numbered, and each page shows the total number of pages of information available on the subject. Each page identifies the key to be used to return to the menu.

7-4. HYPERTEXT NAVIGATION PROCEDURE

At points in the text, preselected items are displayed using special colors for the text and its background. Items of text so color-coded are referred to as "hypertext." The special color coding indicates that additional information is available about the item. The procedure for hypertext navigation is as follows:

Step 1 - Use the F3 key to select the item of interest from any other hypertext items which may also occur in the display. Each time F3 is depressed, the next hypertext item on the page is highlighted. Continue using F3 until the desired item is reached.

Step 2 - Use the F4 key to activate the display of the additional information associated with the selected hypertext item.

Step 3 - Use the SPACE bar to return to the original display after the information has been inspected. Additional hypertext items may then be selected and displayed, as desired, by repeating the F3/F4/SPACE bar procedure.

7-5. GLOSSARY NAVIGATION PROCEDURE

The system glossary is available on preselected displays where the text or graphic information uses specialized terminology. On such displays, the bottom line has an entry in the form "F4 - GLOSSARY". On these displays:

Step 1 - Press the F4 key to display the glossary.

Step 2 - Use the PG UP and PG DN keys for PAGE NAVIGATION (paragraph 7-3) to locate the item in the alphabetical list of glossary items.

PART 8 - SYSTEM CONTINGENCY PROCEDURES

8-1. CONTINGENCY SITUATIONS. The system contingency procedures deal with unexpected situations which occur in the course of use of the system.

8-2. INCORRECT MENU NAVIGATION

- Situation. An unintended menu selection was made producing either a BLANK SCREEN or a display of the WRONG INFORMATION.
- Response

  BLANK SCREEN. To recover, press the SPACE bar. The original menu will reappear and the desired selection can be made.

  WRONG INFORMATION. Inspect screen instructions to identify and carry out the procedure to "Exit" the information. The original menu will reappear, and the desired selection can be made.

8-3. INCORRECT PAGE NAVIGATION

- Situation. While using the PG UP or PG DN keys, the ENTER key or SPACE bar is hit, exiting the information of interest. The original display appears.
- Response. Reselect the item of interest on the display and navigate back to the point where the breakaway occurred. Continue with the correct page navigation keystroke.

8-4. INCORRECT HYPERTEXT NAVIGATION

- Situation. While using the F3 and F4 keys to make a hypertext selection, the ENTER key or SPACE bar is hit, exiting the information of interest. The original display reappears.
- Response. Reselect the item of interest on the display. Continue with the correct hypertext navigation keystroke.

8-5. ERROR MESSAGE (TOPIC_MODULE NOT FOUND)

- Situation. System generates error message that "TOPIC: _Module could not be found." This is due to an inadvertent menu selection of the blank line between the main menu entries.
- Response. To recover, press the enter key three times (rapidly) in succession. The system will reload and return to the main menu. The desired selection can then be made.

8-6. ERROR MESSAGE (MEMORY WARNING)

- Situation. The system generates an error message warning it is about to run out of memory.

- Response. Press F10 to abort current system operation. A menu will appear with a single entry "LOG_PLNR. Press ENTER to make this selection. System operation will be resumed. Navigate back to the information of interest and continue on.

8-7. ERROR MESSAGE (MEMORY FAILURE)

- Situation. The system generates an error message advising it has run out of working (stack) memory. At this point, the system has aborted and is no longer resident in the host computer memory. It must be reloaded from the host hard disk in order to continue.

- Response. Reload the system with the command:

  run_plnr

  Wait for both the reload to complete and the log-on screen to appear. Renavigate to the point of interest and continue on. The reload operation will have cleared the memory.

8-8. RAPID EXIT PROCEDURE

- Situation. User must exit system as rapidly as possible, without spending the time to conduct an orderly exit through the progression of "exit" selections on the system menus.

- Response. Press F10 key twice in rapid succession. System operation will be aborted, and host computer will display its menu (or the DOS prompt).

PART 9 - USE OF THE TEXT FILE EDITOR

9-1. EDIT MECHANISM. The LOG PLANNER includes a built-in editor. Access to this editor has been included so that the information in the system text files may be updated as required.

9-2. FILES AVAILABLE FOR EDIT

a. Files. A text file is associated with each of the four types of information available in the system (PART 5) namely:

- Total Army Analysis Process
- Issue Coordination Management
- Issue Analysis Methodology
- Issue Data Resources

In addition, text files are provided for:

- System Glossary
- Points of Contact
- Log-on and On-line Summary

Each of these seven text files may be edited, as shown in the following table. The table identifies the information in the file and the name assigned to the file for use by the system. Note that these names are mnemonics of their content.

Editable LOG PLANNER Files

Information	File name
Log-on/Summary	CTL.TXT
Total Army Analysis	TAA.TXT
Issue Coordination Management	ICM.TXT
Issue Analysis Methodology	IAM.TXT
Issue Data Resources	IDR.TXT
Glossary	GLS.TXT
Points of Contact	POC.TXT

9-3. ACCESS TO EDITOR. It is anticipated that only a specific individual, the System Operator (SYSOP), will have both the authority and responsibility to modify the system files. In normal system operation, users will not be aware that the edit capability is available, since there is no reference to it in the menus or descriptive information. To provide a restricted access to the editor, the selection of the editor has been concealed. To use the editor:

Step 1 - Start up in the system in the usual manner.

Step 2 - Continue past the system log-on display.

Step 3 - When presented with the menu associated with the question "WHAT TYPE OF INFORMATION IS DESIRED?, activate the editor by depressing the ENTER key three times in succession.

Step 4 - Observe the system to display a menu of the editable files. Note that the menu identifies the files by the file names shown in the above table.

Step 5 - Select the file to be edited from the menu. The selection invokes the editor, and the editor displays the file contents.

9-4. FILE EDIT ACTIVITY

- Update file following editing guidelines in Appendix A. The guidelines will be particularly useful when it is necessary to introduce more material than will fit within the existing page organization.
- Carry out the editing using the Editor Command Set in Appendix B. The command set is also available during editing by pressing the F1 key.
- Upon completion of the file edit, exit the file using the ESC key.
- Edit other files as needed. Note the editing reminders shown on the screen.
- When the editing is completed, exit the editor using the "Exit Editor" menu selection. The system will return to normal operation.

APPENDIX A

FILE EDITING GUIDELINES

A-1. INTRODUCTION. This appendix describes the guidelines to be used in editing the files which contain the information holdings of the LOG PLANNER.

A-2. FILE ORGANIZATION

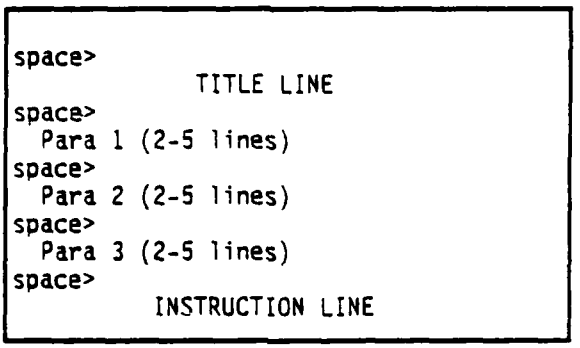
a. File Segments. The text files are organized into segments of text. The segments are separated from each other by delimiters, that is, special labels which indicate where the segment begins and ends. The delimiters come in pairs, a leading delimiter which marks the beginning of the segment and a trailing delimiter which marks the end of the segment. The leading delimiters may be readily recognized in the file as short phrases, briefly summarizing the topic of the segment. Some leading delimiters are associated with hypertext displays. Such delimiters are always preceded by the word "HYPER." The trailing delimiter is always of the form "/end" and is always paired with a leading delimiter.

b. Segment Pages. Each segment consists of one or more pages of information. Pages within a segment are delimited by a special symbol, "#p" sign, which appears at the end of each page. This "#p" sign is recognized by the LOG PLANNER system and is used to generate breaks between the pages. Two types of pages are used in the system, the text page and the graphics page.

A-3. TEXT PAGE. Each page within the segment is formatted in the file in exactly in the manner in which it is to appear when it is displayed. All spaces, offsets, and line widths as well as the text must be entered into the file as it is to appear on the screen. The format of a text page is as follows:

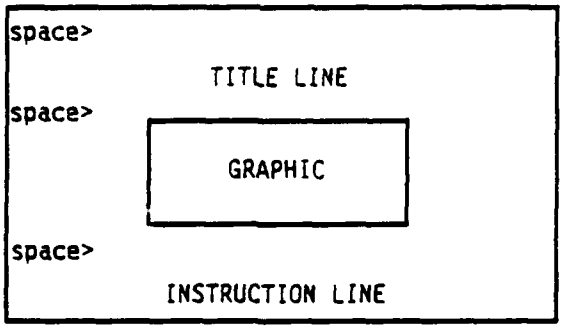
- A title line - set in capitals with space lines top and bottom to emphasize the subject.
- The individual paragraphs - 2-5 lines in length separated by space lines for emphasis;
- An instruction line - to guide the user. This line identifies the page number of the current information (i.e., Page 2 of 4), the command to use to move on (i.e., To EXIT - SPACE bar) and the command to read additional information (i.e., To READ PgUp/PgDn).

The format of the text page is shown in the figure below.



Text Page Layout

A-4. GRAPHICS PAGE. The graphics page contains either a figure or table which is the principal focus of interest on the page. It occupies either the entire page or the major portion of it. The graphic must be limited to the use of horizontal and vertical line segments. It is possible to use the system editor to draw these segments, using the line symbols of the extended ASCII character set, but this is a tedious process. A simpler approach is to use the Cursor, Block, and Delete and Insert commands of the editor to copy and revise existing line segments into the desired configuration. The format of the graphics page follows that of the text page and is shown below.



Graphics Page Layout

APPENDIX B

SYSTEM EDITOR COMMAND SET

B-1. INTRODUCTION. The edit command set is basically that used in the "WORDSTAR" (MicroPro International) word processor and in the "SIDEKICK" (Borland International) memory resident utility, namely the use of the "CTRL" key in combination with other keys to generate text manipulation operations. The commands available in the set are grouped into the following categories and described in the following paragraphs. The information in this appendix is also available in a "help" window, at any time during the editing process, by pressing the F1 key .

- Moving the cursor
- Deleting and Inserting Text
- Block Commands
- Find & Replace Commands and Options
- Reformatting Commands

NOTE - Some commands in the tables use "CTRL &" along with other keys for a command. This means that the "CTRL" key must be held down as the other keys are pressed in order to activate the command. The "&" key itself is not used.

B-2. MOVING THE CURSOR. The keystrike commands shown below are used move the cursor to a point in the text where a subsequent command can then be used to perform a desired text manipulation.

EDITOR COMMANDS - Moving the cursor

Keystrokes	Action
LEFT ARROW	Character left
RIGHT ARROW	Character right
CTRL & LEFT ARROW	Word left
CTRL & RIGHT ARROW	Word right
TAB	Tab
UP ARROW	Line up
DN ARROW	Line down
CTRL & W	Scroll up
CTRL & Z	Scroll down
PgUp	Page up
PgDn	Page down
HOME	Beginning of a line
END	End of a line
CTRL & HOME	Beginning of a page
CTRL & END	End of a page
CTRL & PgDn	Beginning of the file
CTRL & PgUp	End of the file
CTRL & QB	Mark beginning of block
CTRL & QK	Mark end of block

B-3. DELETING AND INSERTING TEXT. The keystrike commands shown below are used to delete characters, words, line segments, and sections of text previously identified using the "BLOCK COMMANDS" (paragraph B-4). The "CTRL & V" command is used to toggle the editor from an "overwrite" to an "insert" mode of text entry.

EDITOR COMMANDS - Deleting and Inserting Text

Keystrokes	Action
CTRL & G	Delete character under cursor
CTRL & H	Delete character left of cursor
CTRL & T	Delete next word
CTRL & Y	Delete a line
CTRL & QY	Delete to the end of a line
CTRL & KY	Delete a marked block
CTRL & V	Insert on/off
CTRL & N	Insert a line

B-4. BLOCK COMMANDS. The keystroke commands shown below are used to manipulate portions of text. The manipulation occurs in two steps. First, the block is identified by the commands which mark the beginning and end of the block. Then, the operation on the block is carried out using the other block commands.

EDITOR COMMANDS - Block Commands

Keystrokes	Action
CTRL & KB	Mark beginning of block
CTRL & KK	Mark end of a block
CTRL & KH	Hide/display a block
CTRL & KC	Copy a block
CTRL & KV	Move a block
CTRL & KY	Delete a block
CTRL & KR	Read a block from a file
CTRL & KW	Write a block to a file
CTRL & KP	Print a block or entire file if block not marked
CTRL & KS	Save the file

CAUTION - Skill must be developed in using these commands. If an uncorrectable error is made, use the ESC command to leave the file - the changes made will be lost, but the file will remain in its original condition. Conversely, be sure to use the "CTRL & KS" command when finished, to save the file with its changes; otherwise, the changes will be lost!

8-5. FIND & REPLACE COMMANDS AND OPTIONS. The keystroke commands shown below are used to automatically locate selected items of text ("text strings") in a file, and if desired, change the text string to another string. After entering the command, you will be prompted for the string to be found. If you are replacing text, you will then be prompted for the replacement text. You will also be prompted for the option under which the command will operate (see next table).

EDITOR COMMANDS - Find & Replace Commands

Keystrokes	Action
CTRL & QA	Find and replace a string
CTRL & QF	Find occurrence of a string
CTRL & L	Find the next occurrence

EDITOR COMMANDS - Find & Replace Commands

Option	Action
B	Search backward from the current cursor position
G	Global replacement
n	Find nth occurrence of the search string
N	Replace without asking
U	Ignore case when searching for text
V	Search for whole words only

B-6. REFORMATTING COMMANDS. The commands shown below may be used to expedite the typing activity. These commands would normally be associated with the creation of extensive amounts of new text, and not with file updating.

EDITOR COMMANDS - Reformatting Commands

Keystrokes	Action
CTRL & B	Reformat paragraph
CTRL & OR	Set the right margin
CTRL & QI	Toggle autoindent mode
CTRL & QW	Toggle word wrap

APPENDIX G

KNOWLEDGE PROCESSING TECHNOLOGY

G-1. INTRODUCTION. This appendix provides a overview of an evolving computer technology which can be used to compute with, search, and manipulate knowledge. The phrase "knowledge processing" has been borrowed from the developer of the software tool used to implement the LOG PLANNER, namely, Knowledge Garden of Nassau, New York, who market their particular approach to such technology as "knowledge processing."

G-2. KNOWLEDGE PROCESSING SHELLS. These are specialized software tools (shells) with command features which allow them to treat extended amounts of text and graphics images as entities. These systems process "knowledge" rather than "data" in the sense that complete statements, not just items of data, are handled as entities. The statements can be extensive and cover a complete description of a situation, concept, or activity. The systems are shells in that they provide a command language and complier. The application is developed in a file using the syntax and command language of the shell. The shell is then used to compile the file into a knowledge processing system. Additional files may be included in the application to hold some or all of the text/graphics handled by the system.

G-3. LOG PLANNER SHELL SELECTION. The shell used for implementation of the LOG PLANNER is the software product "Knowledge Pro," developed by Knowledge Garden, Nassau, New York. The shell has the following special features considered important for the application.

- Microcomputer-based, DOS compatible.
- Capability to handle extensive amounts of text.
- Capability for multiple screen window generation.
- Capability for control of screen color.
- Capability to access external files (see paragraph G-4).
- Capability for generation of "hypertext" (see paragraph G-5).
- Capability for manipulation of knowledge using "topics" (see paragraph G-6).
- Built-in editor (see paragraph G-7).
- Liberal license arrangement (see paragraph G-8).

G-4. EXTERNAL FILE ACCESS

a. File Access Capability. The shell command language has a specific "read" command to access information (text/figures) stored in external files. The ability to use external files for information storage is particularly useful in the LOG PLANNER design. It permits the descriptive text to be stored externally. This allows the text to be readily updated by nonprogrammer personnel, using the system built-in editor.

b. File Blocks. The "read" command has options, one of which allows selective access to the information in the file. With this option, the files are constructed as a sequence of "blocks" of information with each block corresponding to a specific set of one or more "pages" of information. Each block is set off by a pair of delimiters, one which leads and one which follows the block information. The lead delimiter must be unique to the block and is typically a word or phrase which summarizes the block subject matter.

c. Block Pages. Within each block there may be one or more "pages" of information, where each page is a single screen of information, occupying no more than 22 lines on the screen. The pages themselves are delimited by a (user-inserted) pound symbol (#) control character. The screen display control automatically recognizes this character and presents the retrieved block information a page at a time.

G-5. HYPERTEXT FEATURE. The hypertext feature allows certain items of text to be linked to additional information. This concept of an item of text linked to related items of text is a recent software technology innovation called "hypertext" (Ref 6). It is provided as a built-in feature of the Knowledge Pro shell used for the LOG PLANNER implementation. The hypertext items are predefined by marking off each item with a special pair of delimiters. This causes the text to be set off in special colors. Noting the colors, the user can use a special key to select the text and another special key to request the display of the associated text. The shell recognizes the selection and displays the associated text. It is possible for each segment of associated text to have, in turn, delimited text items so that a chain of associated text items can become a "nested" set. The user of the system can request the items in turn and progressively drop down through the nested items. When the inspection of the items is complete, the user then progressively returns through the sequence of nested items to the original text. Using this feature, elaborate descriptions can be generated, but the user is in control of the amount of description actually displayed, based on the information needs of the moment.

G-6. TOPIC FEATURE. The "topic" is the central programming construct in the Knowledge Pro shell. It is used for both structural organization of the program and as an object for knowledge storage.

a. Structural Organization. When used for structural organization, the program is set up as a sequence of topics. The sequence may be either a prescription for the order of processing or constitute a list of topics which will be selected during processing. Operation of the system is initiated by a "do" command, which contains a topic as its argument. Within a topic, commands (see Ref 8) and their associated topics are executed in order. These commands may call for display of information and/or request information (including menu selections). They may also include logical operators which can transfer control to other topics, as prescribed conditions are met. As an aspect of structural organization, topics can be arranged (nested) to establish logical hierarchies. These hierarchies can be programmed to exhibit properties of precedence and inheritance.

b. Object for Knowledge Storage. The value of a topic can be established in three ways. It can be given (assigned) a value. A value can be computed, or it can be found by search. The search follows a backward path through the topic hierarchy; however, unlike an expert system, it will not automatically prompt for a value if a search fails--rather, an error message is generated. As a knowledge holding object, the topic may be a value (alpha or numeric), a list of values, or an extended string (pages long) of text. Each topic has a unique name by which it is invoked during the processing.

G-7. BUILT-IN EDITOR. The shell has a built-in editor. The editor is primarily used for program development purposes but can also be used by the application program.

G-8. RUNTIME LICENSE. As with most microcomputer-based software vendors, Knowledge Garden makes a distinction between development of an application, using the shell, and use of the application in the intended working environment, the so-called "runtime" version of the application. There is a one-time charge for the shell and, typically, an additional charge for distribution of the runtime version (either a single charge or a per-copy charge). However, with Knowledge Garden, the purchase of the shell entitles the developer to distribute the system in a runtime configuration without further cost. The limitation in runtime version is that the user cannot update the code.

APPENDIX H

USER EVALUATION FORMS

H-1. INTRODUCTION. This appendix reproduces the user evaluation forms completed as part of the system demonstration. The responses to these forms provided the basis for the survey results reported in Chapter 6.

H-2. VARIATIONS IN SURVEY. The original intent was for each demonstration participant to review each of the four information modules. However, only three of the six participants reviewed each of the modules. The remaining three, at the Log Center, Ft. Lee, limited their review to the first three information modules, namely the TAA Process Description module, the Issue Coordination Management module, and the Issue Analysis Methodology module. They did not review the fourth, the Issue Data Resources module. This latter module describes the data available from the LOG Decision Support System. This system was not, in fact, accessible to the Log Center personnel electing not to review the module.

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED:	EVALUATOR: *Karen Fallen* ①
CMA	OFFICE: *LOGC, FSD*
	DATE: *10 Aug 89*

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

    ___ Not Useful ___ Somewhat Useful _✓_ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

    ___ Too Narrow _✓_ About Right ____Too Broad

03. How complete is the DETAIL ?

    ___ Not Enough _✓_ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

    ___ Not Clear ___ Clear _✓_ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

    ___ Not Clear ___ Clear _✓_ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

    ___ Too Much _✓_ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

    ___ Poor Layout ___ Adequate Layout _✓_ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

    ___ Not Noticed ___ Effective _✓_ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

    ___ Not Clear ___ Clear _✓_ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

    ___ Not Useful ___ Somewhat Useful _✓_ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

    ___ Inconvenient _✓_ Convenient ___ Very Convenient

12. How effective is the use of COLOR in presenting material ?

    ___ Distracting ___ Not Noticed _✓_ Complementary

PART II - SPFCIFIC COMMENTS ON OPERATION OF MODULE

1. [illegible] definitions in text.
2. b. no [illegible] for user.

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED: Issue Coordination Mgt

EVALUATOR: Karen Torian

OFFICE: ATCL-FSD

DATE: 10 Aug 89

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

___ Too Narrow ✓ About Right ____Too Broad

03. How complete is the DETAIL ?

___ Not Enough ✓ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

___ Not Clear ___ Clear ✓ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

___ Not Clear ✓ Clear ___ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

___ Too Much ✓ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

___ Poor Layout ___ Adequate Layout ✓ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

___ Not Noticed ___ Effective ✓ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

___ Not Clear ___ Clear ✓ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

___ Inconvenient ___ Convenient ✓ Very Convenient

12. How effective is the use of COLOR in presenting material ?

___ Distracting ___ Not Noticed ✓ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

Define acronyms used, e.g. MSEP also PSID

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED:	EVALUATOR: Karen [illegible]
IAM	OFFICE: ATCL-FSD
	DATE: 10 Aug 89

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

    ___ Not Useful ___ Somewhat Useful _✓_ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

    ___ Too Narrow _✓_ About Right ____Too Broad

03. How complete is the DETAIL ?

    ___ Not Enough _✓_ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

    ___ Not Clear ___ Clear _✓_ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

    ___ Not Clear _✓_ Clear ___ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

    ___ Too Much _✓_ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

    ___ Poor Layout ___ Adequate Layout _✓_ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

    ___ Not Noticed ___ Effective _✓_ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

    ___ Not Clear _✓_ Clear ___ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

    ___ Not Useful ___ Somewhat Useful _✓_ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

    ___ Inconvenient _✓_ Convenient ___ Very Convenient

12. How effective is the use of COLOR in presenting material ?

    ___ Distracting ___ Not Noticed _✓_ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

Need to expand the Glossary to be all [illegible] applicable/accessible to the other models.

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED: TAI

EVALUATOR: Ida Price (2)

OFFICE: ATCC-FS

DATE: 10 Aug

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

___ Not Useful ___ Somewhat Useful _✓_ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

___ Too Narrow __✓ About Right ____Too Broad

03. How complete is the DETAIL ?

___ Not Enough _✓_ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

___ Not Clear _✓_ Clear ___ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

___ Not Clear _✓_ Clear ___ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

___ Too Much __✓ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

___ Poor Layout ___ Adequate Layout _✓_ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

___ Not Noticed _✓_ Effective ___ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

___ Not Clear __✓ Clear ___ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

___ Not Useful ___ Somewhat Useful _✓_ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

___ Inconvenient _✓_ Convenient ___ Very Convenient

12. How effective is the use of COLOR in presenting material ?

___ Distracting ___ Not Noticed _✓_ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

All Higher text on the module. Co[illegible]

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED:	EVALUATOR: I Ju
ICM	OFFICE: ATCL-FS
	DATE: 10 NOV

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

___ Not Useful ___ Somewhat Useful ___✓ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

___ Too Narrow ___✓ About Right ____Too Broad

03. How complete is the DETAIL ?

___ Not Enough ___✓ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

___ Not Clear ___✓ Clear ___ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

___ Not Clear ___✓ Clear ___ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

___ Too Much ___✓ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

___ Poor Layout ___ Adequate Layout ___✓ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

___ Not Noticed ___✓ Effective ___ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

___ Not Clear ___✓ Clear ___ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

___ Not Useful ___ Somewhat Useful ___✓ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

___ Inconvenient ___✓ Convenient ___ Very Convenient

12. How effective is the use of COLOR in presenting material ?

___ Distracting ___ Not Noticed ___✓ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED:	EVALUATOR: Ida Price
IAM	OFFICE: ATCC-T
	DATE: 10 Apr

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

___ Too Narrow ✓ About Right ____Too Broad

03. How complete is the DETAIL ?

___ Not Enough ✓ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

___ Not Clear ✓ Clear ___ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

___ Not Clear ✓ Clear ___ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

___ Too Much ✓ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

___ Poor Layout ___ Adequate Layout ✓ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

___ Not Noticed ___ Effective ✓ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

___ Not Clear ___ Clear ✓ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

___ Inconvenient ✓ Convenient ___ Very Convenient

12. How effective is the use of COLOR in presenting material ?

___ Distracting ___ Not Noticed ✓ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

+ Complete Glossary is very important particularly for ... starting out & defining Acronyms ...

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED: TAA

EVALUATOR: DRONLICH (3)

OFFICE: COSC

DATE: 6 NOV 89

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

___ Too Narrow ✓ About Right ____Too Broad

03. How complete is the DETAIL ?

___ Not Enough ✓ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

___ Not Clear ✓ Clear ___ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

___ Not Clear ✓ Clear ___ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

___ Too Much ✓ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

___ Poor Layout ___ Adequate Layout ✓ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

✓ Not Noticed ___ Effective ___ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

___ Not Clear ✓ Clear ___ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

___ Inconvenient ✓ Convenient ___ Very Convenient

12. How effective is the use of COLOR in presenting material ?

___ Distracting ___ Not Noticed ✓ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

NEED TO MORE EXPLANATION OF CUSAGE, TRMUSAD, ETC. BRIEFLY TELL WHAT THEY ARE AND WHAT THEY DO.

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED:	EVALUATOR: Dronchak
ICM	OFFICE: CDSC
	DATE: 10 NOV 89

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

___ Too Narrow ✓ About Right ____Too Broad

03. How complete is the DETAIL ?

___ Not Enough ✓ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

___ Not Clear ✓ Clear ___ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

___ Not Clear ✓ Clear ___ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

___ Too Much ✓ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

___ Poor Layout ✓ Adequate Layout ___ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

___ Not Noticed ✓ Effective ___ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

___ Not Clear ✓ Clear ___ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

___ Inconvenient ✓ Convenient ___ Very Convenient

12. How effective is the use of COLOR in presenting material ?

___ Distracting ___ Not Noticed ✓ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

UPDATE DOCS -

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED:	
JAUG	EVALUATOR: Drumiski
	OFFICE: LOGC
	DATE: 10 AUG 89

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

    ___ Not Useful ___ Somewhat Useful _✓_ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

    ___ Too Narrow _✓_ About Right ____Too Broad

03. How complete is the DETAIL ?

    ___ Not Enough, _✓_ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

    ___ Not Clear _✓_ Clear ___ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

    ___ Not Clear _✓_ Clear ___ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

    ___ Too Much _✓_ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

    ___ Poor Layout ___ Adequate Layout _✓_ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

    ___ Not Noticed ___ Effective _✓_ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

    ___ Not Clear _✓_ Clear ___ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

    ___ Not Useful ___ Somewhat Useful _✓_ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

    ___ Inconvenient _✓_ Convenient ___ Very Convenient

12. How effective is the use of COLOR in presenting material ?

    ___ Distracting ___ Not Noticed _✓_ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

[illegible] COMPLETED HORSE BLANKET AND DEVELOP EXAMPLES.

F/16/89

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED: TAA

EVALUATOR: 1TC Scipione (4)

OFFICE: ODCSOPS DAMO-FDL

DATE: 16 AUG 89

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

___ Not Useful ✓ Somewhat Useful ___ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

✓ Too Narrow ___ About Right ____Too Broad

03. How complete is the DETAIL ?

✓ Not Enough. ___ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

___ Not Clear ___ Clear ✓ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

___ Not Clear ___ Clear ✓ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

___ Too Much ✓ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

___ Poor Layout ___ Adequate Layout ✓ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

___ Not Noticed ___ Effective ✓ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

___ Not Clear ___ Clear ✓ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

___ Inconvenient ___ Convenient ✓ Very Convenient

12. How effective is the use of COLOR in presenting material ?

___ Distracting ___ Not Noticed ✓ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

8/16/89

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED:	EVALUATOR: LTC Scipione
ICM	OFFICE: DAMO - FDL
	DATE: 16 AUG 89

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

___ Not Useful _✓_ Somewhat Useful ___ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

_✓_ Too Narrow ___ About Right ____Too Broad

03. How complete is the DETAIL ?

_✓_ Not Enough ___ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

___ Not Clear ___ Clear _✓_ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

___ Not Clear ___ Clear _✓_ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

___ Too Much _✓_ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

___ Poor Layout ___ Adequate Layout _✓_ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

___ Not Noticed ___ Effective _✓_ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

___ Not Clear ___ Clear _✓_ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

___ Not Useful ___ Somewhat Useful _✓_ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

___ Inconvenient ___ Convenient _✓_ Very Convenient

12. How effective is the use of COLOR in presenting material ?

___ Distracting ___ Not Noticed _✓_ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

not enough detail TARGET new
04/05 audience

8/16/89

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED:	EVALUATOR: LTC Scipione
IAM	OFFICE: DAMO-FDL
	DATE: 16 AUG 89

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

___ Not Useful ___✓ Somewhat Useful ___ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

___✓ Too Narrow ___ About Right ____Too Broad

03. How complete is the DETAIL ?

___✓ Not Enough ___ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

___ Not Clear ___ Clear ___✓ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

___ Not Clear ___ Clear ___✓ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

___ Too Much ___✓ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

___ Poor Layout ___ Adequate Layout ___✓ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

___ Not Noticed ___ Effective ___✓ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

___ Not Clear ___ Clear ___✓ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

___ Not Useful ___ Somewhat Useful ___✓ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

___ Inconvenient ___ Convenient ___✓ Very Convenient

12. How effective is the use of COLOR in presenting material ?

___ Distracting ___ Not Noticed ___✓ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

need to amplify what is actly is
needed in detail-

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED:
TAA
ICM
FAM
FDR

EVALUATOR: Don Feener (S)
OFFICE: DALO-PLA
DATE:

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

___ Not Useful ✓ Somewhat Useful ___ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

___ Too Narrow ✓ About Right ____Too Broad

03. How complete is the DETAIL ?

___ Not Enough ✓ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

___ Not Clear ___ Clear ✓ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

___ Not Clear ___ Clear ✓ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

___ Too Much ✓ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

___ Poor Layout ___ Adequate Layout ✓ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

___ Not Noticed ___ Effective ✓ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

___ Not Clear ✓ Clear ___ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

___ Inconvenient ✓ Convenient ___ Very Convenient

12. How effective is the use of COLOR in presenting material ?

___ Distracting ___ Not Noticed ✓ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

- Describe each Model named
- Describe M-Force and other variations in FAS.

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED: TAA Description

EVALUATOR: DIANNA WOODY (6)

OFFICE: DALO-SMS

DATE: 17 Aug 1989

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

___ Too Narrow ✓ About Right ____Too Broad

03. How complete is the DETAIL ?

___ Not Enough ✓ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

___ Not Clear ___ Clear ✓ Very Clear see my comments

05. Is the TERMINOLOGY clear in its definition and use?

___ Not Clear ___ Clear ✓ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

___ Too Much ✓ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

___ Poor Layout ___ Adequate Layout ✓ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

___ Not Noticed ___ Effective ✓ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

___ Not Clear ___ Clear ✓ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

___ Inconvenient ___ Convenient ✓ Very Convenient

12. How effective is the use of COLOR in presenting material ?

___ Distracting ___ Not Noticed ✓ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

The module was very user friendly. See my comments on the attached sheets

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED:	EVALUATOR: DIANNA WOODY
Issue Coordination Management	OFFICE: DALO-SMS
	DATE: 17 Aug 1989

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

___ Too Narrow ✓ About Right ____Too Broad

03. How complete is the DETAIL ?

___ Not Enough ✓ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

___ Not Clear ___ Clear ✓ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

___ Not Clear ___ Clear ✓ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

___ Too Much ✓ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

___ Poor Layout ___ Adequate Layout ✓ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

___ Not Noticed ___ Effective ✓ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

___ Not Clear ___ Clear ✓ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

___ Inconvenient ___ Convenient ✓ Very Convenient

12. How effective is the use of COLOR in presenting material ?

___ Distracting ___ Not Noticed ✓ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

I could not get to TDA Issue Categories screen.

The LOIC listing is too old. PLF has a more recent one. I had published a later version before I left - for interface and functional. It would also be good to list the [illegible] (Mr Fish, etc. as interface points of contact as well as one person from the QM, TC, ORD, and MMCS. Mr Fish could give you [illegible] as well as their office symbols.)

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED: Force Analysis Methodology

EVALUATOR: DIANNA WOODY

OFFICE: DALO-SMS

DATE: 17 Aug 1989

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

01. How USEFUL is this material for your job ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

02. Is the SCOPE of the material useful for your purposes ?

___ Too Narrow ✓ About Right ____Too Broad

03. How complete is the DETAIL ?

___ Not Enough ✓ About Right ___ Too Much

04. Is the WORDING clear and easy to follow ?

___ Not Clear , ___ Clear ✓ Very Clear

05. Is the TERMINOLOGY clear in its definition and use?

___ Not Clear ___ Clear ✓ Very Clear

06. How would you describe the AMOUNT of text on the screens ?

___ Too Much ✓ About Right ___ Too Little

07. How would you describe the ARRANGEMENT of the screen text ?

___ Poor Layout ___ Adequate Layout ✓ Good Layout

08. Do the FIGURES/GRAPHICS contribute to the presentation ?

___ Not Noticed ___ Effective ✓ Highly Effective

09. Are the screen INSTRUCTIONS for system operation clear ?

___ Not Clear ___ Clear ✓ Very Clear

10. How useful is the PGUP/PGDN FEATURE for review of material ?

___ Not Useful ___ Somewhat Useful ✓ Very Useful

11. How convenient is the use of the F3/F4 KEYS for system operation?

___ Inconvenient ___ Convenient ✓ Very Convenient

12. How effective is the use of COLOR in presenting material ?

___ Distracting ___ Not Noticed ✓ Complementary

PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

Where you see the term "MTOE" change to "TOE". The "M" does not apply in TAA requirements determination

USER EVALUATION - LOG PLANNER DEMONSTRATION

MODULE EVALUATED: Issue Data Resources

EVALUATOR: DIANNA WOODY

OFFICE: DALO-SMS

DATE: 17 Aug 89

PART I - OVERALL EVALUATION OF OPERATION OF MODULE

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PART II - SPECIFIC COMMENTS ON OPERATION OF MODULE

APPENDIX I

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GLOSSARY

ABBREVIATIONS, ACRONYMS, AND SHORT TERMS

ATCO	action code
ADCON	administrative control code
ALO	authorized level of allowance
AR	Army regulation
ARSTAF	Army Staff
BIOP	basis of issue plan
CMC	commodity manager code
COMPO	component (of force) code
CSS	combat service support
DAMPL	Department of the Army Master Priority List
DEPL	deployment
DSS	decision support system
EDM	Equipment Distribution Module
EEA	essential element(s) of analysis
E-DATE	effective date
EOH	equipment onhand
ERC	equipment readiness code
FAD	force activity desegrator
FAS	Force Accounting System
FIL	fill
FY	fiscal year
K	thousand
LIN	line item number
loc	location
LOI	logistics organizational integrator

LOIC	Logistics Organizational Integrator Committee
LOG	logistics
LPSA	Logistics Programing Support Activity
MACOM	major Army command
MOB	mobilization
MTOE	modification table(s) of organization and equipment
NO	number
NSN	national stock number
OH	onhand
OI	organizational integrator
ODCSLOG	Office of the Deputy Chief of Staff for Logistics
ODCSOPS	Office of the Deputy Chief of Staff for Operations and Plans
OSD	Office of the Secretary of Defense
POC	point of contact
POM	Program Objective Memorandum
POMCUS	prepositioned material configured to unit sets
PPBES	Planning, Programing, Budgeting, and Execution System
PR	priority
RICC	reportable item control code
RQD	required
RQMTS	requirements
SHL	stratification hierarchy level
SRC	standard requirement code
SSN	standard study number
SYSOP	system operator
TAA	Total Army Analysis
TAADS	The Army Authorization Document System

TAEDP	Total Army Equipment Distribution Program
TAP	The Army Plan
TDA	table(s) of distribution and allowances
TPSN	troop program sequence number
UIC	unit identification code

CAA	**LOGISTICS FORCE PLANNER ASSISTANT (LOG PLANNER) STUDY**	**STUDY SUMMARY CAA-SR-89-24**

THE REASON FOR PERFORMING THE STUDY was to develop a more comprehensive and integrated approach to conveying information about the combat service support (CSS) units planning process to Army Staff logistics planners. Personnel newly assigned to logistics planning need an orientation to the overall process. More experienced planner personnel need access to specific information for reference purposes.

THE STUDY SPONSOR was the Deputy Chief of Staff for Logistics, Headquarters, Department of the Army, who established the study objective and monitored the study activity.

THE STUDY OBJECTIVE was to develop a computer-based assistant to familiarize logistics force planners with the management and evaluation of CSS issues.

THE SCOPE OF THE STUDY was the development of logistics planning information needs in the context of the Total Army Analysis (TAA) process.

THE MAIN ASSUMPTION of this work is that the system is to provide information in support of the overall CSS programming process. It is not intended to support specific CSS problem solving situations.

THE BASIC APPROACHES used in this study were to:

(1) Identify the information needs associated with the management and evaluation of CSS issues within TAA.

(2) Design the modules and associated files, comprising the system, using knowledge processing technology.

(3) Demonstrate the system to personnel with logistics planning responsibilities to assess its usefulness.

THE PRINCIPAL FINDINGS of the work reported herein are as follows:

(1) A flexible, easy to use, microcomputer-based system to present planning-related information to logistics force planners was possible to develop and found acceptable in demonstrations of the system.

(2) There will be an on-going requirement to update the information in the LOG PLANNER as the TAA process evolves and undergoes revision.

(3) There is no formal arrangement for tracking force structure issues as they evolve during the TAA process. Only approved force structure changes are recorded in the formal Army data systems. A need to maintain visibility of all issues, for reference in subsequent cycles of the TAA, is indicated.

THE STUDY EFFORT was directed by Mr. James J. Connelly, Force Systems Directorate.

COMMENTS AND QUESTIONS may be sent to the Director, US Army Concepts Analysis Agency, ATTN: CSCA-FSL, 8120 Woodmont Avenue, Bethesda, Maryland 20814-2797.

CAA — CONCEPTS ANALYSIS AGENCY — UNITED STATES ARMY	**LOGISTICS FORCE PLANNER ASSISTANT (LOG PLANNER) STUDY**	**STUDY SUMMARY CAA-SR-89-24**

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